UNITED STATES DEPARTMENT OF LABOR
JAMES J. DAVIS, Secretary
BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

MONTHLY
LABOR REVIEW

VOLUME 29 NUMBER 6

DECEMBER, 1929

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1929

For sale by the Superintendent of Documents, Washington, D. C. - - - - - - - - - Price 15 Cents per Copy
Subscription Price per Year; United States, Canada, Mexico, $1.50; Other Countries, $2.25

CERTIFICATE

This publication is issued pursuant to the provisions of the sundry civil act (41 Stats. 1430) approved March 4, 1921.

Contents

Special articles:	Page
Unemployment as a cause of family dependency, by Wilhelmina Luten	1
Problem of idleness in old people's homes	13
Union wage rates in time-work trades in 1929	26
Industrial and labor conditions:	
New England labor congress	34
Employment and adjustment of the older worker	35
Women in industry:	
Part-time jobs for women	39
Switzerland—Woman workers	43
Health and industrial hygiene:	
Health of workers in the granite industry	45
Physical impairment in clerical occupations	49
Sickness among industrial employees during first quarter of 1929	50
Industrial medical service in a group of Chicago plants	52
Industrial accidents and diseases:	
Accident prevention from the standpoint of the State	55
Accident costs in coal and metal mines in the United States	57
Fatal accidental falls	61
Death of pioneer in safety work	62
California—Fatalities in the petroleum industry, 1928	62
Massachusetts—	
Industrial accidents in 1927–28	63
Occupational diseases investigated in 1928	64
New Jersey—Industrial disease investigation bureau	66
Bulgaria—Industrial accidents, 1922 to 1926	67
Germany—Accidents in the mines of the Ruhr in 1928	68
Sweden—Industrial accidents in 1926	69
Switzerland—Industrial accidents, 1918 to 1927	70
Workmen's compensation and social insurance:	
Legislative action on workmen's compensation in 1929	71
Next meeting of International Association of Industrial Accident Boards and Commissions	73
Netherlands—Social insurance	73
Labor laws and court decisions:	
Statute prohibiting coercion of employees in trading not intended for protection of merchant	80
Award of compensation on uncorroborated statement of deceased employee	81
Collective bargaining case appealed to Supreme Court for final determination	82
Cooperation:	
Labor banking movement in the United States	83
Jewish cooperation in Palestine	89
Notes on cooperative developments	92

	Page
Labor congresses:	
Convention of American Federation of Labor, 1929	94
Labor turnover:	
Labor turnover in American factories	98
Industrial disputes:	
Strikes and lockouts in the United States in October, 1929	101
Conciliation work of the Department of Labor in October, 1929	105
Germany—Activities of labor courts, 1929	109
Sweden—Industrial disputes, 1918 to 1928	110
Housing:	
Building permits in principal cities, September and October, 1929	111
Michigan—Study of housing in relation to certain social problems in Detroit	120
Wages and hours of labor:	
History of wages in the United States from colonial times	122
Salaries in fire departments in principal cities	124
Recent changes in wages and hours of labor	140
Massachusetts—Collection of wage claims in 1928	145
Minnesota—Salary standardization of city employees in St. Paul	146
New York—Increase in municipal salaries in New York City	147
Night work upheld by Cotton Textile Institute	148
International comparison of real wages	148
Australia—Principles of wage fixation	152
Great Britain and Northern Ireland—Average earnings of workers, 1924 and 1928	155
Italy—Wages of food workers	161
Labor agreements, awards and decisions:	
Arbitration awards—	
Locomotive firemen and enginemen—Boston & Maine R. R.	162
Stage employees and motion-picture machine operators—Colorado Springs, Colo	162
Typographical workers—Milwaukee, Wis	163
Agreements—	
Great Britain—Railway wage agreement	164
Unemployment relief and stabilization:	
New Jersey—Paterson silk producers combine to stabilize industry	165
Germany—Amendments to unemployment insurance law	165
Irish Free State—Report of committee on unemployment relief	166
Trend of employment:	
Summary for October, 1929	168
Employment in selected manufacturing industries in October, 1929	169
Employment in coal mining in October, 1929	179
Employment in metalliferous mining in October, 1929	180
Employment in quarrying and nonmetallic mining in October, 1929	181
Employment in public utilities in October, 1929	181
Employment in wholesale and retail trade in October, 1929	182
Employment in hotels in October, 1929	183
Employment in canning and preserving in October, 1929	184
Employment on Class I steam railroads in the United States	185
Changes in employment and pay rolls in various States	186
Help-wanted advertising as an indicator of the demand for labor	190
Local surveys of unemployment—Buffalo, N. Y., and Cincinnati, Ohio	192
Colorado—Occupational distribution of Denver high-school graduates	192

Wholesale and retail prices:
Page
Retail prices of food in the United States 195
Retail prices of coal in the United States 212
Index numbers of wholesale prices in October, 1929 215
Wholesale prices in the United States and in foreign countries, 1923 to September, 1929 217
Cost of living:
Standard of living of professional man's family in 1816–17 as compared with 1926–27 222
Inquiry into comparative cost of living in Europe and the United States 229
Argentina—Income and expenditure of a laborer's family in Buenos Aires in 1928 229
Immigration and emigration:
Statistics of immigration for October, 1929 231
Publications relating to labor:
Official—United States 233
Official—Foreign countries 235
Unofficial 238

This Issue in Brief

Accidents in coal and metal mines of the United States cost more than $200,000,000 a year, according to estimates of the United States Bureau of Mines. Of this cost, about $110,000,000 is borne by the employees in direct wage loss. The cost of accidents to the employee is about $124 per man per year in coal mining, and about $122 per man in metal mining. The need for hard, continued, and intelligent safety work is urged in order to reduce accidents in these industries to a minimum. Page 57.

Of 64 firms whose experience in the employment and adjustment of older workers was reported, only 9 had definite written rules as to the age at time of hiring. The majority had a tacit understanding that the employment office should not hire older men and women. Where an age limit is established, however, it really works out much lower than the limit set, chiefly because of the policy of hiring young people and training them up in the business. Page 35.

One of the most advanced social-insurance systems in Europe is in operation in the Netherlands. The system now covers old-age, invalidity, and accident insurance, and a system of sickness insurance is to go into effect on March 1, 1930. This social legislation is based upon an attempt at exact calculation of contributions, benefits, and expenses, and is of practically universal application within the country. Page 73.

Of 1,000 families applying for aid at three Boston social agencies, 557 gave unemployment or underemployment as a cause of dependency. Although there were usually other contributing causes as well, nevertheless in 11 per cent of the cases unemployment, and in 3 per cent of the cases underemployment, was the sole cause of the family's economic breakdown. Sickness was the factor most frequently associated with lack of employment. Among the other factors, occurring in varying numbers of cases, were personal defects, old age, intemperance, family friction, and large families. The wages in the last job, for the women, ranged from under $5 to $25 or more per week, the modal group being $10–$14; while for the men they ranged from under $15 to $35 or more, the modal group being $20–$24 per week. Of the men, however, one-fifth had received no wages for some time before they applied for aid. Page 1.

The average hourly rate in the principal time-work trades in 67 cities in 1929 was $1.204, as compared with $1.195 in 1928. This was shown by a survey recently completed by the Bureau of Labor Statistics, covering 786,010 organized workers. Average weekly working hours decreased slightly, the reduction amounting to 0.4 per cent, due mainly to the increasing number of trades working the 5-day week. Page 26.

A decided correlation between crowded housing conditions and deaths from certain diseases (such as penumonia and tuberculosis), between population density and infant mortality, and between population density and crime, is shown by a recent housing survey made in Detroit by the department of health of that city. Page 120.

Salaries of first-year privates in the fire departments of cities of 100,000 population or more range from $1,260 per year in Fort Worth and Houston, Tex., to $2,160 in Oakland, Calif., as shown by a recent survey by the Bureau of Labor Statistics. Generally the salaries vary with the period of service, some of the cities providing for automatic increases each quarter or half year for the first year or two, the maximum being reached at the end of two, three, or four years, or even longer. In other cases, efficiency as well as length of service is considered in making salary increases. In Boston, Mass., Erie, Pa., and Trenton, N. J., the maximum is not reached until after the private has served five years. The highest salary paid to any private was found in Detroit, Mich., which pays an annual salary of $2,520 after 15 months' service. Page 124.

A high incidence of tuberculosis among granite workers, as well as a high rate of sickness generally, was disclosed by a recent study by the Public Health Service. Among workers in this industry 68 per cent of the cases of illness lasted 8 days or longer, as compared with only 35 to 40 per cent among industrial workers generally. Of 93 deaths among the granite workers during the period of study, 78 per cent were due to tuberculosis. A large percentage of those who contracted this disease died from it, within a short time after contracting it. The prevalence of silicosis has increased with the use of pneumatic hand tools. Page 45.

On June 29, 1929, there were in operation 22 labor banks, with resources of $108,539,894. These banks reached their peak of development in 1926, at which time there were 36, having resources of $126,356,944. Some of the recession since 1926 has been due to the disappearance of some of the Brotherhood of Locomotive Engineers' institutions from the ranks of the labor banks. The industrial relations section of Princeton University has been studying the labor banks for the past four years and has recently issued a report thereon, which is reviewed on page 83.

In 1840 a carpenter in Massachusetts earned on the average $1.25 a day, while his working hours averaged 65 per week; in 1928 the carpenter in Boston earned $1.25 an hour and his working week was 44 hours. The Pennsylvania bricklayer of 1847 received from $1.75 to $2 per day and worked 60 hours a week; in 1928 he was paid $1.62½ per hour and worked 40 hours per week. The rate of the cotton weaver in Massachusetts has risen from 33 cents a day in 1841 to 43.1 cents an hour in 1928, while his hours in the same period have decreased from 84 to 50 per week. Page 122.

Nearly 61,000 employees received increases in wages during recent months, according to reports received by the Bureau of Labor Statistics. Some 28,000 of these were municipal employees of the city of New York, who received increases ranging from less than $200 to nearly $300 per year. The building trades had the next largest group, with about 25,000 workers obtaining increases averaging about 12½ cents per hour; also, about 4,000 workers in these trades were successful in obtaining the 5-day week. Page 140.

MONTHLY
LABOR REVIEW
U. S. BUREAU OF LABOR STATISTICS

VOL. 29, NO. 6 WASHINGTON DECEMBER, 1929

Unemployment as a Cause of Family Dependency

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THE present study of the case histories of 1,000 clients of three Boston family relief agencies brings out the importance of unemployment as a factor necessitating financial assistance from outside the family. Of 1,000 families applying for aid at these Boston social agencies, 557 gave unemployment or underemployment as a cause for their economic breakdown. These families represented typical cases, opened since 1918 and closed before 1929, in which financial aid was given by the three agencies.

The social workers who wrote these histories were concerned with individuals and families and the data therefore permit the study of personal and family aspects rather than community or industrial aspects of unemployment. The records did not permit the study of unemployment or underemployment alone, for unemployment does not very often occur as the single factor in the economic breakdown of an individual or a family. However, it was the sole reason given in 11 per cent of the 557 cases; in 3 per cent underemployment was the sole reason. In the remaining 86 per cent of cases, unemployment was associated with other factors, as shown in Table 1. The histories showed unemployment or underemployment to be the chief or primary cause of dependency in the majority of the cases in which they were present. Sickness was the factor most frequently associated with lack of employment. When sickness was the primary factor it was usually that of the chief wage earner, and, when secondary, the sickness of other members of the family which added to the difficulties of the unemployed wage earner. Personal defects and old age were next in importance; when primary, these, too, indicated direct causes of the chief wage earners' unemployment, and when secondary usually applied to other members of their families, and likewise contributed to the wage earners' burdens.

Personal defects, intemperance, family friction, large families, old age, desertion, death, sickness, and industrial unemployment all played more or less important parts in bringing these 557 families to dependency, and rarely, if ever, were these factors found alone. Even in the cases of industrial unemployment which seemed to have no important complicating factors, dependency was promoted by large families, improvidence and incompetence. However, there must have been many families with no better characters, personalities or abilities, with no greater intelligence, no smaller families, and no less sickness, who were able to be self-supporting because they were employed.

Industrial unemployment was the largest single factor in bringing these 557 families to dependency. One hundred and forty out of 367 men were laid off. Though personal defects and sickness were more often present and really more important, though not so obvious, factors in their economic breakdowns, they are more difficult to prevent; but industrial unemployment, as recent experiments in regularization of employment have shown, is at least reducible if not preventable, and offers an objective opportunity for efforts to reduce dependency.

TABLE 1.—UNEMPLOYMENT AND UNDEREMPLOYMENT AS PRIMARY AND SECONDARY FACTORS IN FAMILY DEPENDENCY

Factor contributing to dependency	Clients in whose dependency the specified factors were—					
	Secondary to unemployment		Secondary to underemployment		Primary, with unemployment or underemployment as secondary factors	
	Number	Per cent	Number	Per cent	Number	Per cent
Total families	[1] 227	[1] 100.0	[1] 76	[1] 100.0	254	100.0
Sickness	72	31.7	29	38.2	133	52.4
Personal defect	36	15.9	8	10.5	20	7.9
Desertion	7	3.1	2	2.6	14	5.5
Pregnancy	22	9.7	3	3.9	10	3.9
Old age	16	7.0	3	3.9	14	5.5
Accident	9	4.0	4	5.3	8	3.1
Intemperance	7	3.1	4	5.3	6	2.4
Death	7	3.1	2	2.6	9	3.5
Imprisonment	3	1.3	----	----	11	4.3
Divorce	2	.9	1	1.3	2	.8
Nonsupport	----	----	----	----	11	4.3
Unadjusted alien	----	----	----	----	6	2.4
Family friction	----	----	----	----	2	.8
Other	15	6.6	10	13.2	8	3.1
Unemployment	----	----	4	5.3	----	----
Underemployment	7	3.0	----	----	----	----
None	63	27.8	17	22.4	----	----

[1] Not the sum of the items, because in some cases there was more than one secondary factor.

Dependents and Sources of Support in Families of Unemployed

NEARLY 77 per cent of these 557 clients were men and wives. All but 15 per cent of them had children—99 had one child, 102 had two children, 92 had three, 61 had four, 51 had five, 35 had six, 18 had seven, 8 had eight, and 8 had nine or more. Both the modal and the mean number of children were three. Altogether nearly 1,400 children were affected by the unemployment or underemployment of the 557 clients. Of the 1,317 minors in this group, 44 per cent were under school age and 86 per cent were under 14 years of age. To these should be added 60 unborn children who constituted an even greater burden, since the expense of childbirth had to be met, and the mother was deprived, to some extent at least, of the ability to care for her household and her children. Table 2 and chart show a striking difference in the number of children under school age of the unemployed and of the other clients. Children of three and four years of age constituted the largest groups of the whole series and together made up 15 per cent of all the children of the unemployed clients. The smaller number of families having children of school or

working ages may be due to the fact that mothers or children of such families prevent dependency by seeking gainful employment.

PERCENTAGE DISTRIBUTION BY AGES OF CHILDREN IN DEPENDENT FAMILIES—A COMPARISON BETWEEN FAMILIES WITH UNEMPLOYMENT AND THOSE WITH OTHER CAUSES OF DEPENDENCY

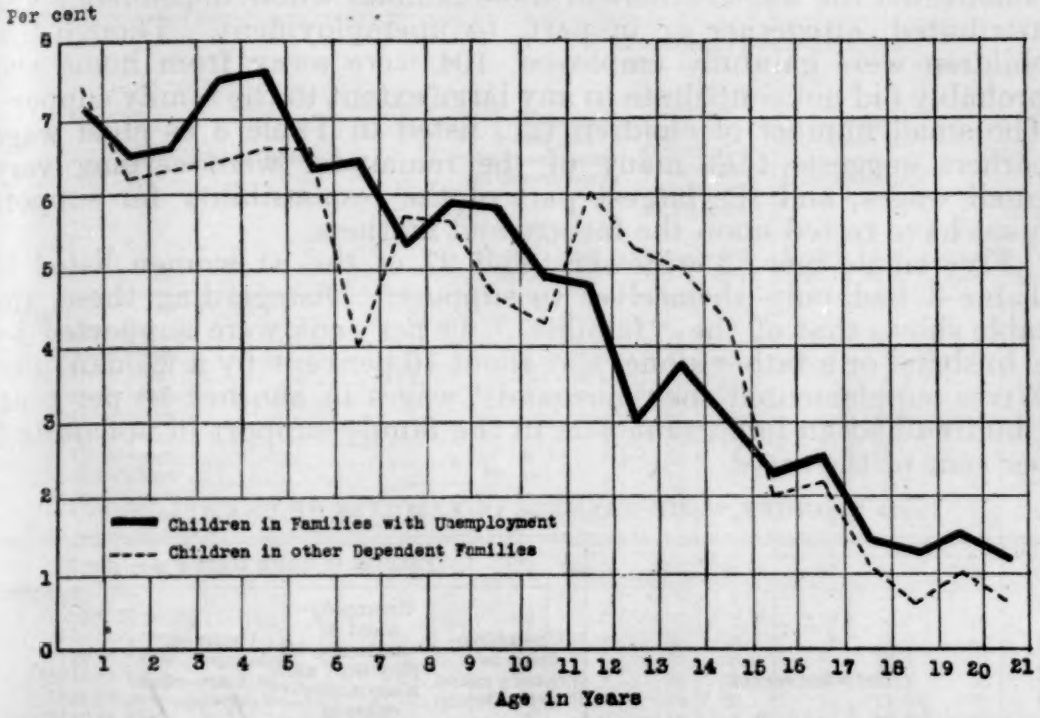

TABLE 2.—AGES OF CHILDREN IN 474[1] DEPENDENT FAMILIES AFFECTED BY UNEMPLOYMENT COMPARED WITH THOSE IN ALL DEPENDENT FAMILIES

Age	Children in families affected by unemployment or underemployment		Children in other dependent families		All children	
	Number	Per cent	Number	Per cent	Number	Per cent
Unborn	[2] 60					
Under 1 year	99	7.1	73	7.4	172	7.2
1 year and under 2 years	90	6.5	61	6.2	151	6.4
2 and under 3 years	92	6.6	62	6.3	154	6.5
3 and under 4 years	104	7.5	63	6.4	167	7.0
4 and under 5 years	105	7.6	64	6.6	169	7.1
5 and under 6 years	88	6.3	65	6.6	153	6.4
6 and under 7 years	89	6.4	39	4.0	128	5.4
7 and under 8 years	74	5.3	56	5.7	130	5.5
8 and under 9 years	83	5.9	55	5.6	138	5.8
9 and under 10 years	81	5.8	45	4.6	126	5.3
10 and under 11 years	68	4.9	42	4.3	110	4.6
11 and under 12 years	67	4.8	59	6.0	126	5.3
12 and under 13 years	42	3.0	52	5.3	94	3.9
13 and under 14 years	51	3.7	49	5.0	100	4.2
14 and under 15 years	42	3.0	42	4.3	84	3.5
15 and under 16 years	32	2.3	20	2.0	52	2.2
16 and under 17 years	35	2.5	22	2.2	57	2.3
17 and under 18 years	19	1.4	11	1.1	30	1.3
18 and under 19 years	18	1.3	6	.6	24	1.0
19 and under 20 years	21	1.5	10	1.0	31	1.3
20 and under 21 years	17	1.2	6	.6	23	1.0
21 years and over	78	5.6	80	8.1	158	6.6
Total	1,395	100.0	982	100.0	2,377	100.0

[1] 83 clients had no children.
[2] Unborn children and twins were not included in the total and were not stated in the other groups.

In 425, or 76 per cent, of the families of the unemployed no children were gainfully employed. In the remaining 132 families at least 210 children over 14 were employed. These children with 136 women (25 per cent of all the women) and 445 men (97 per cent of the men) constituted the wage earners of these families whose dependency was attributed, altogether or in part, to unemployment. Though 210 children were gainfully employed, 104 were away from home and probably did not contribute to any large extent to the family support. The small number of children (27) listed in Table 3 as chief wage earners suggests that many of the remainder were earning very small wages, and the largest part of the responsibility for support must have rested upon the fathers and mothers.

Five single men, 3 widowers, and 27 of the 81 women listed in Table 3 had only themselves to support. Disregarding these, the table shows that of the "families," 69 per cent were supported by a husband or a father alone, and about 10 per cent by a woman only. Wives supplemented their husbands' wages in another 10 per cent. Children had an important part in the family support in not quite 5 per cent of the cases.

TABLE 3.—CHIEF WAGE EARNERS IN FAMILIES OF UNEMPLOYED

Chief wage earner	Families in which there was—							
	Unemployment as a primary cause of dependency		Unemployment or underemployment as a secondary cause of dependency		Underemployment, as a primary cause of dependency		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Man only	172	75.8	164	64.6	58	76.3	394	70.7
Woman only	27	11.9	46	18.1	8	10.5	81	14.5
Man and woman	17	7.5	25	9.8	8	10.5	50	9.0
Son only	2	.9	9	3.5	-------	-------	11	2.0
Daughter only	2	.9	3	1.2	2	2.6	7	1.3
Mother and son	3	1.3	2	.8	-------	-------	5	.9
Father and daughter	1	.4	1	.4	-------	-------	2	.4
Son and daughter	1	.4	1	.4	-------	-------	2	.4
No wage earner	2	.9	3	1.2	-------	-------	5	.9
Total	227	100.0	254	100.0	76	100.0	557	100.0

Age of Parents

TABLE 4 bears out the natural expectation that, with such a large proportion of children under school age, the parents would be young. Though very few were under 20, almost three-fourths (72 per cent) of the men in families most directly affected by unemployment, and three out of five of the remaining men were between 25 and 45, the ages at which men should be doing their best work and should have the best chances of employment. Most of the 38 men over 60 were evidently handicapped by old age, since this was listed as a factor in 30 cases, some of which, however, were those of aged widows and single women. Sickness, partly a result of old age, may account for the unemployment or underemployment of the rest of those over 60.

The women also were largely grouped between 25 and 40, but, when compared with the men, there were fewer over 60 and more under 25. The 16 women under 20 must have been wives or unmarried mothers, since they would not otherwise have received relief

from family agencies. For these younger women unemployment was a problem amplified by the necessity of care for children, and their dependency may need no further explanation.

TABLE 4.—AGES OF MEN AND WOMEN IN DEPENDENT FAMILIES OF THE UNEMPLOYED

Sex and age	Families in which there was—							
	Unemployment as a primary cause of dependency		Unemployment or underemployment as a secondary cause of dependency		Underemployment as a primary cause of dependency		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Men:								
Under 20 years			3	1.6			3	0.7
20 to 24 years	17	10.0	17	8.8	2	3.3	36	8.5
25 to 29 years	35	20.6	31	16.1	5	8.2	71	16.7
30 to 34 years	40	23.5	25	13.0	11	18.0	76	17.9
35 to 39 years	34	20.0	36	18.7	13	21.3	83	19.6
40 to 44 years	14	8.2	27	14.0	12	19.7	53	12.5
45 to 49 years	9	5.3	16	8.3	11	18.0	36	8.5
50 to 59 years	9	5.3	15	7.8	4	6.6	28	6.6
60 to 69 years	11	6.5	14	7.3	2	3.3	27	6.4
70 to 79 years	1	.6	8	4.1	1	1.6	10	2.4
80 years and over			1	.5			1	.2
Total	170	100.0	193	100.0	61	100.0	[1]424	100.0
Women:								
Under 20 years	10	5.7	3	1.4	3	4.5	16	3.5
20 to 24 years	29	16.5	32	14.7	2	3.0	63	13.7
25 to 29 years	38	21.6	41	18.9	11	16.4	90	19.6
30 to 34 years	34	19.3	35	16.1	21	31.3	90	19.6
35 to 39 years	27	15.3	35	16.1	10	14.9	72	15.7
40 to 44 years	14	8.0	14	6.5	7	10.4	35	7.6
45 to 49 years	8	4.5	20	9.2	2	3.0	30	6.5
50 to 59 years	9	5.1	21	9.7	7	10.4	37	8.0
60 to 69 years	7	4.0	10	4.6	4	6.0	21	4.6
70 to 79 years			3	1.4			3	.7
80 years and over			3	1.4			3	.7
Total	176	100.0	217	100.0	67	100.0	[2]460	100.0

[1] Ages for men were not given in 133 cases. [2] Ages of women were not given in 97 cases.

Nationality and Period of Residence

NATIONALITY and length of time in the United States and in the city of Boston are other factors which may help to explain the unemployment or underemployment of the 557 clients. More than a third of the men and women for whom data were given were born in this country. The largest group of foreigners came from Russia and consisted chiefly of underemployed tailors and peddlers; 23.4 per cent of the men and 20.8 per cent of the women were in this group. Their number is somewhat disproportionate, since the Jewish clients, the large majority of whom were born in Russia, comprise one-third of the unemployed, but only one-fourth of the 1,000 cases used in this study. The Italians were next in importance, with 16.1 per cent of the men and 12.9 per cent of the women. The Irish were not so numerous as might be expected in a city with so large an Irish population as Boston (forming only 5.0 and 7.2 per cent, respectively), probably because they apply to the Catholic Charitable Bureau for assistance. Small numbers came from Poland, the United Kingdom, the Balkan countries, Germany, Austria, France, Spain, the Scandinavian countries, and Lithuania. The small representations from some of these countries may have been due to the fact that people

of these nationalities are assisted by benefit societies maintained by their own countrymen.

Since two-thirds of these men and women were born in foreign countries, an attempt was made to find out how long they had been in the United States. Data were not given in 125 cases, and the rest were quite evenly distributed into 5-year groups (Table 5). Six of the 13 families who had been in the country less than one year were really unadjusted aliens, but the others do not seem to have been very directly affected by their short stay in this country. The modal group was that of families who had been in the United States 20 years or more. The men, at least, in this group, should be Americanized, and foreign birth should not be a handicap in their search for employment. Foreign-born women, however, mingle less with Americans and their lack of knowledge of the English language or of American customs may handicap them in their search for employment. Sixty-two women and 41 men were recorded as speaking little or no English, which gives tentative support to the above statement.

Twenty-six clients had been in Boston less than three months, which may have been the reason behind their unemployment. But it does seem that three months should give, to those who have come from other American cities, time enough for adjustment to new conditions, and that for a very large majority of the clients the length of time in Boston could not have been very significant as a factor. It was impossible to get data about the location of these people before they came to Boston. The problem of adjustment may have been an important factor if they came from rural sections.

TABLE 5.—LENGTH OF TIME IN THE UNITED STATES AND IN BOSTON OF DEPENDENT FAMILIES OF THE UNEMPLOYED

Period of residence	Families in which there was—							
	Unemployment as a primary cause of dependency		Unemployment or underemployment as a secondary cause of dependency		Underemployment as a primary cause of dependency		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Residence in the United States:								
Under 1 year	-------	-------	13	6.5	-------	-------	13	3.0
1 year and under 2 years	1	0.6	2	1.0	1	1.7	4	.9
2 and under 3 years	16	9.2	1	.5	-------	-------	17	3.9
3 and under 4 years	1	.6	2	1.0	2	3.3	5	1.2
4 and under 5 years	3	1.7	5	2.5	-------	-------	8	1.9
5 and under 10 years	-------	-------	18	9.0	2	3.3	20	4.6
10 and under 15 years	24	13.9	34	17.0	6	10.0	64	14.8
15 and under 20 years	17	9.8	31	15.6	7	11.7	55	12.7
20 years and over	32	18.5	47	23.6	15	25.0	94	21.8
Native born	79	45.7	46	23.1	27	45.0	152	35.2
Total	173	100.0	199	100.0	60	100.0	[1] 432	100.0
Residence in Boston:								
Under 1 month	5	3.9	8	6.3	1	3.4	14	4.9
1 month and under 3 months	6	4.7	4	3.1	2	6.9	12	4.2
3 and under 6 months	8	6.3	4	3.1	2	6.9	14	4.9
6 and under 9 months	8	6.3	10	7.9	1	3.4	19	6.7
9 and under 12 months	2	1.6	5	3.9	-------	-------	7	2.5
1 year and under 2 years	13	10.2	4	3.1	3	10.3	20	7.0
2 and under 3 years	8	6.3	4	3.1	2	6.9	14	4.9
3 and under 4 years	6	4.7	5	3.9	2	6.9	13	4.6
4 and under 5 years	7	5.5	5	3.9	-------	-------	12	4.2
5 and under 10 years	15	11.7	17	13.4	1	3.4	33	11.6
10 and under 15 years	15	11.7	10	7.9	7	24.1	32	11.3
15 and under 20 years	9	7.0	19	15.0	2	6.9	30	10.6
20 years and over	26	20.3	32	25.2	6	20.7	64	22.5
Total	128	100.0	127	100.0	29	100.0	[2] 284	100.0

[1] Not reported in 125 cases.

[2] Not reported in 273 cases.

Education of Parents in Families of Unemployed

EDUCATION should be very significant, but data on this point were given in so few cases that it is dangerous to make generalizations. Literacy in a foreign language was shown in 58 cases; 45 had attended primary school but had not graduated; 32 had completed grammar school; 19 had attended secondary schools but had not graduated; 19 had completed their high-school work; 5 had completed vocational courses: and 7 were men and women with a college education.

Causes of Unemployment

MANY of the foregoing factors do not seem significant. Sickness, however, accounts for a great deal of the dependency which they could not explain. Sickness was present in 4 out of every 5 of the 557 families. In the 445 families so afflicted, 585 people were sick and 90 women were pregnant. Almost half (47 per cent) of the 458 men, 2 of every 5 women, and 1 of every 10 children were sick; and one-sixth of the 537 women in the families with unemployment were pregnant. Pregnancy and the sickness of women and children were for the most part merely contributing causes of dependency, but since 97 per cent of the men were wage earners, nearly half of them must have lost their jobs, done part-time work, or have been inefficient at their work, on account of sickness, either before or during the periods of contact with relief agencies. Unemployment as a result of sickness during the case could not have been a factor in bringing families to dependency but was doubtless instrumental in keeping many families from becoming self-supporting again.

As already shown (Table 1), sickness was the most important factor contributing to the dependency of these 557 families. It was also a most important cause of unemployment, as Tables 6 and 7 show. One man in every five lost his last job in his usual occupation on account of sickness, temporary or chronic, while accidents, delicate health, and physical defects were responsible for the loss of some 7 per cent more of the 367 jobs. Some 25 per cent of the 126 men for whom data were given lost their employment on jobs not in the line of their regular occupations, because of these causes. One in every five of the 123 women recorded as having lost a recent job was disabled through sickness, delicate health, accident or physical defect. Pregnancy and childbirth increased the ratio to one in every three.

Only one other direct cause of unemployment was more important than sickness, i. e., no available jobs. Thirty-eight per cent of the 367 men declared that they had lost their last positions in their usual or regular occupations because of weather, business depression, end of business, seasonality of occupation, irregular occupation, or had just been "laid off." Almost the same proportion (39 per cent) of the 126 men who gave reasons for losing jobs in irregular occupations had lost them through lack of work. About five-eighths of these were in the group of cases in which unemployment was given as the primary factor causing dependency, and they comprised about half of the 243 men in that group. Lack of available work was of the same importance as sickness as a cause of unemployment of women, since one in every five was laid off.

TABLE 6.—REASONS FOR TERMINATION OF RECENT JOBS IN USUAL AND OTHER OCCUPATIONS, GIVEN BY UNEMPLOYED MEN

Reason for loss of job	Usual occupation					Other occupations				
	Men giving specified reason for loss of job, in families in which dependency was due to—					Men giving specified reason for loss of job, in families in which dependency was due to—				
	Unemployment, primary cause	Unemployment or underemployment, secondary cause	Underemployment, primary cause	Total		Unemployment, primary cause	Unemployment or underemployment, secondary cause	Underemployment, primary cause	Total	
				Number	Per cent				Number	Per cent
Chronic illness	6	35	2	43	11.7	1	2	2	5	4.0
Business depression	22	10	4	36	9.8	5	4	1	10	7.9
Temporary illness	5	22	2	29	7.9	2	5	1	8	6.3
Emigrating, or going to another job	20	6	3	29	7.9	7	5	1	13	10.3
Lack of work (general statement)	18	6	2	26	7.1	10	2	1	13	10.3
Lack of work:										
Seasonal occupation	12	6	5	23	6.3	3			3	2.4
Irregular occupation	12	5	5	22	6.0	11	6		17	13.5
End of business	13	5	4	22	6.0	5			5	4.0
Shiftlessness or laziness	7	5	2	14	3.8	2	3		5	4.0
Accident	4	7	2	13	3.5	3	6		9	7.1
Delicate health	4	8		12	3.3	3	4		7	5.6
Arrest or imprisonment	1	10	1	12	3.3					
Industrial dispute	5	4	1	10	2.7					
Quarrel with workers or boss	6	2	1	9	2.5	2			2	1.6
Intemperance	4	4		8	2.2	2	3		5	4.0
Lack of work, for other reasons than above listed	7		1	8	2.2	2			2	1.6
Old age	2	5		7	1.9	2			2	1.6
Illness in family	4	1	1	6	1.6		1		1	.8
Instability of individual	1	3	2	6	1.6	2	3		5	4.0
Dishonesty or suspected dishonesty	4	1		5	1.4		1		1	.8
Maladjustment to work or to conditions	3		2	5	1.4		1		1	.8
Mental deficiency		3		3	.8	2	1		3	2.4
Lack of work due to weather	3			3	.8					
Dissatisfaction with wages	2	1		3	.8	3		1	4	3.2
Physical defect		1	1	2	.5	2			2	1.6
Introduction of machinery		1	1	2	.5					
Bad character	2			2	.5					
Attachment of wages						1		1	2	1.6
Other reasons	5	1	1	7	1.9	1			1	.8
Total	172	152	43	[1] 367	100.0	71	47	8	[2] 126	100.0

[1] Reason not reported in 71 cases.

[2] Reason not reported in 312 cases.

TABLE 7.—REASONS FOR TERMINATION OF RECENT JOBS GIVEN BY UNEMPLOYED WOMEN

Reason for loss of job	Women giving specified reasons for loss of job in families in which dependency was due to—				
	Unemployment, primary cause	Unemployment or underemployment, secondary cause	Underemployment, primary cause	Total	
				Number	Per cent
Marriage	10	7	3	20	16.3
Pregnancy or childbirth	9	6	1	16	13.0
Home duties	2	5	5	12	9.8
Lack of work (general statement)	5	6		11	8.9
Temporary illness	1	8	1	10	8.1
Chronic illness	1	5	1	7	5.7
Delicate health	1	4	2	7	5.7
Lack of work:					
Seasonal occupation	3	1	1	5	4.1
Business depression	2	2	1	5	4.1
Maladjustment to work or to conditions	1	1	2	4	3.3
Quarreled with or annoyed workers or boss	1	2		3	2.4
Lack of work due to irregular occupation	2	1		3	2.4
Old age		2		2	1.6
Accident	2			2	1.6
Illness in family	1	1		2	1.6
Dishonesty or suspected dishonesty	1	1		2	1.6
Shiftlessness, or laziness	2			2	1.6
Bad time-keeping			1	1	.8
Instability of individual			1	1	.8
Physical defect		1		1	.8
Other	3	3	1	7	5.7
Total	47	56	20	123	100.0

Occupations of the Unemployed

ALTHOUGH seasonal occupations did not show the expected large proportion among the unemployed (Table 8), the numbers concerned are too small to afford a basis for significant conclusions. The men in the building trades, notably seasonal, constituted 11.2 per cent of the men in whose cases unemployment or underemployment was a factor, but they also constituted 9.4 per cent of the men whose dependency was caused by other factors. The few very noticeable variations were among the metal workers, having twice as many proportionally and three times as many actually in the unemployed group as in the others; the tailors showed about the same ratio (most of these were probably Jews who were underemployed rather than unemployed). Eighteen of the 25 carpenters were unemployed and 14 of them gave unemployment as the primary factor in their dependency. Twice as many painters and paper hangers and five times as many other building workers (the kind was not specified) were listed in the unemployed as in the other groups. Unskilled laborers constituted almost an eighth of the unemployed and of all the others; but they are a sixth of the group in which unemployment was the primary factor.

TABLE 8.—USUAL OCCUPATIONS OF MEN IN DEPENDENT FAMILIES

Usual occupation	Number of men reporting dependency due to—								Lack of employment not a factor		Grand total	
	Unemployment, primary cause		Unemployment or underemployment, secondary cause		Underemployment, primary cause		Total					
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Manufacturing:												
Baker	4	2.0	2	1.0			6	1.3	3	1.0	9	1.2
Printer	3	1.5	3	1.5	1	1.5	7	1.5	2	.6	9	1.2
Electrician	3	1.5	1	.5			4	.9	2	.6	6	.8
Metal worker	12	6.1	7	3.4	3	4.5	22	4.7	7	2.3	29	3.7
Machinist	9	4.6	7	3.4	4	6.0	20	4.3	12	3.9	32	4.1
Semiskilled rubber or shoe worker	9	4.6	12	5.8	2	3.0	23	4.9	14	4.5	37	4.7
Semiskilled clothing worker	1	.5	6	2.9	2	3.0	9	1.9	4	1.3	13	1.7
Tailor	5	2.5	26	12.6	4	6.0	35	7.4	10	3.2	45	5.8
Carpenter	14	7.1	3	1.5	1	1.5	18	3.8	7	2.3	25	3.2
Plasterer or brick or stone mason	1	.5	1	.5	1	1.5	3	.6	5	1.6	8	1.0
Painter or paper hanger	6	3.0	4	1.9	4	6.0	14	3.0	7	2.3	21	2.7
Plumber, gas or steam fitter	1	.5	2	1.0			3	.6	4	1.3	7	.9
Other building worker, skilled or semiskilled	5	2.5	4	1.9	1	1.5	10	2.1	2	.6	12	1.5
Unskilled building laborer	3	1.5	2	1.0			5	1.1	4	1.3	9	1.2
Unskilled laborer	33	16.8	19	9.2	6	9.0	58	12.3	38	12.2	96	12.3
Other	5	2.5	8	3.9	5	7.5	18	3.8	21	6.8	39	5.0
Transportation:												
Chauffeur or taxi driver	5	2.5	5	2.4	2	3.0	12	2.6	4	1.3	16	2.0
Motorman, conductor, engineer or fireman	1	.5	3	1.5			4	.9	8	2.6	12	1.5
Teamster or expressman	9	4.6	9	4.4	2	3.0	20	4.3	10	3.2	30	3.8
Seaman or fisherman	2	1.0	2	1.0	3	4.5	7	1.5	6	1.9	13	1.7
Longshoreman	2	1.0	5	2.4	5	7.5	12	2.6	7	2.3	19	2.4
Laborer	10	5.1	7	3.4	2	3.0	19	4.0	9	2.9	28	3.6
Porter	2	1.0	1	.5	1	1.5	4	.9	1	.3	5	.6
Other			1	.5	2	3.0	3	.6	10	3.2	13	1.7
Trade:												
Clerk in store	6	3.0	6	2.9	2	3.0	14	3.0	4	1.3	18	2.3
Commercial traveler	2	1.0	1	.5	1	1.5	4	.9	3	1.0	7	.9
Insurance agent			5	2.4			5	1.1			5	.6
Retail dealer	3	1.5	2	1.0	1	1.5	6	1.3	7	2.3	13	1.7
Cobbler	1	.5	3	1.5			4	.9			4	.5
Laborer	2	1.0	3	1.5	2	3.0	7	1.5	4	1.3	11	1.4
Delivery man	1	.5					1	.2	2	.6	3	.4
Other	10	5.1	20	9.7	5	7.5	35	7.4	22	7.1	57	7.3
Professional:												
Bookkeeper or cashier			1	.5			1	.2	2	.6	3	.4
Other			5	2.4			5	1.1	12	3.9	17	2.2
Public service:												
Soldier, sailor, or marine			1	.5	2	3.0	3	.6	14	4.5	17	2.2
Policeman or fireman	1	.5					1	.2	1	.3	2	.3
Laborer	1	.5	1	.5			2	.4	9	2.9	11	1.4
Other									3	1.0	3	.4
Domestic or personal service:												
Barber	1	.5	2	1.0	1	1.5	4	.9	5	1.6	9	1.2
Janitor	7	3.6	1	.5			8	1.7			8	1.0
Hotel or restaurant worker	12	6.1	5	2.4			17	3.6	9	2.9	26	3.3
Domestic servant									2	.6	2	.3
Other			3	1.5			3	.6	4	1.3	7	.9
Other occupations	5	2.5	7	3.4	2	3.0	14	3.0	11	3.5	25	3.2
Total	197	100.0	206	100.0	67	100.0	470	100.0	311	100.0	781	100.0

Similar data on women's occupations are given in Table 9, which shows the number of women who were housewives but who were also gainfully employed. Forty per cent of the married women had other occupations. A sixth of these had given them up when they married but 37 per cent worked after marriage, either before or during their

contact with the relief agencies, to supplement their husbands' wages or to support themselves when deserted or widowed.

TABLE 9.—USUAL AND OTHER OCCUPATIONS OF WOMEN IN FAMILIES AFFECTED BY UNEMPLOYMENT

Usual occupation	Women having specified usual and other occupations												Total	
	Housewife	Day-worker in home	Charwoman, office cleaner	Domestic servant	Laundress	Dressmaker or seamstress, nonfactory	Clothing or shoe-factory worker	Confectionery or bakery worker	Clerical worker or saleswoman	Hotel or restaurant worker	Other [1]	None	Number	Per cent
Housewife	--	18	10	10	11	19	25	19	10	22	52	280	476	88.1
Dayworker in home	--	--	--	--	--	--	--	--	--	--	1	1	2	.4
Domestic servant	--	1	--	--	--	1	--	--	--	1	--	3	6	1.1
Laundress	2	2	--	--	--	--	--	--	--	--	1	1	6	1.1
Dressmaker or seamstress, nonfactory	--	1	--	1	--	--	1	--	--	--	2	2	7	1.3
Clothing or shoe factory worker	3	1	--	1	--	--	--	--	--	--	2	2	9	1.7
Confectionery or bakery worker	1	1	--	1	--	--	--	--	--	--	--	1	4	.7
Clerical worker or saleswoman	--	--	1	1	--	--	1	--	--	--	1	4	8	1.5
Lodging-house keeper	--	--	--	1	--	--	--	--	--	--	1	--	2	.4
Hotel or restaurant worker	--	3	--	--	--	--	--	--	--	--	2	2	7	1.3
Other	1	--	--	1	1	2	--	--	1	1	2	4	13	2.4
Total	7	27	11	16	12	22	27	19	11	24	64	300	540	100.0

[1] The most important of these were "other" factory workers, foster mothers, and nurses.

Weekly Earnings

FIFTY-SEVEN women were reported as working part time and 60 full time at about the period when their cases opened, and 26 worked part time and 67 full time when the cases closed. The wages of the women ranged from $5 or under to more than $25 per week, as shown in Table 10. The modal group was $10–$14 at both opening and closing of the cases. However, since these wages were reported over a period of 10 years, they give only a general idea of the wages these women were able to earn.

Somewhat more information is given for the men, but this also is only general. Two hundred and twenty men had been working full time and 86 part time at or shortly before the opening of the cases, and 183 were working full time and 86 part time at the close. The modal wage for the men was $20–$24 per week, but approximately a fifth of them had received no wages for some time before they applied for aid and the wages of another fifth were not stated, so that the modal group comprises about one-tenth of the men in the whole number affected by unemployment and underemployment. Twenty-three men had received wages of $35 or more per week shortly before they applied for aid, but a short period of unemployment combined with sickness may exhaust the savings even of a person of excellent earning capacity.

TABLE 10.—WEEKLY WAGES OF MEN AND WOMEN AT OR SHORTLY BEFORE APPLICATION FOR AID AND AT CLOSE OF CASE

Sex, and weekly wage	Number of persons reporting each classified weekly wage at—									
	Opening of case: Dependency due to—			Total		Close of case: Dependency due to—			Total	
	Unemployment, primary cause	Unemployment or underemployment, secondary cause	Underemployment, primary cause	Number	Per cent	Unemployment, primary cause	Unemployment or underemployment, secondary cause	Underemployment, primary cause	Number	Per cent
Men:										
Less than $15	10	18	13	41	16.3	8	7	5	20	12.0
$15 to $19	12	19	10	41	16.3	14	8	5	27	16.2
$20 to $24	28	23	16	67	26.7	19	25	7	51	30.5
$25 to $29	21	21	1	43	17.1	19	7	8	34	20.4
$30 to $34	18	16	2	36	14.3	8	6	3	17	10.2
$35 or more	8	13	2	23	9.2	11	4	3	18	10.8
Total	97	110	44	[1] 251	100.0	79	57	31	167	100.0
Women:										
Less than $5	2	6	2	10	11.1	1	2	2	5	10.0
$5 to $9	9	10	2	21	23.3	4	6	1	11	22.0
$10 to $14	12	19	3	34	37.8	8	13	1	22	44.0
$15 to $19	5	8	4	17	18.9	1	5	2	8	16.0
$20 to $24	2	1	1	4	4.4	1	1	1	3	6.0
$25 or more	1	2	1	4	4.4	----	1	----	1	2.0
Total	31	46	13	[2] 90	100.0	15	28	7	50	100.0

[1] Not reported in 207 cases. Not reported in 447 cases.

Period of Unemployment

TWO TO FOUR months was the most common period of unemployment (Table 11), but 80 per cent of the 340 men for whom data were given had been unemployed less than a year (this includes those who said that they had been unemployed "a short time"). Some may have had more recent jobs in other then their usual occupations. Very little information was available as to the length of time since the last job in another occupation; 53 men, however, had lost their jobs in their other occupations within six months before they applied for relief.

TABLE 11.—LENGTH OF UNEMPLOYMENT IN USUAL OCCUPATION BEFORE APPLICATION FOR AID OF UNEMPLOYED MEN IN DEPENDENT FAMILIES

Period of unemployment	Number of men reporting each classified period of unemployment: Dependency due to—							
	Unemployment, primary cause		Unemployment or underemployment, secondary cause		Underemployment, primary cause		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Under 1 month	14	8.0	24	17.6	5	16.7	43	12.6
1 month and under 2 months	28	16.1	14	10.3	2	6.7	44	12.9
2 and under 4 months	37	21.3	21	15.4	3	10.0	61	17.9
4 and under 6 months	13	7.5	11	8.1	2	6.7	26	7.6
6 and under 9 months	17	9.8	9	6.6	1	3.3	27	7.9
9 and under 12 months	8	4.6	8	5.9	3	10.0	19	5.6
1 year and under 3 years	10	5.7	15	11.0	2	6.7	27	7.9
3 and under 5 years	4	2.3	3	2.2	----	----	7	2.1
5 years or more	5	2.9	5	3.7	1	3.3	11	3.2
"Short time"	27	15.5	13	9.6	10	33.3	50	14.7
"Long time"	11	6.3	13	9.6	1	3.3	25	7.4
Total	174	100.0	136	100.0	30	100.0	[1] 340	100.0

[1] Length of unemployment in usual occupation was not stated in 80 cases and 38 men had not lost jobs in usual occupations.

Problem of Idleness in Old People's Homes

AS PART of its study of the care of old people in the United States,[1] the Bureau of Labor Statistics made an attempt to obtain data as to what the managements of old people's homes are doing to keep the minds and hands of the residents occupied.

It was found that idleness is a real problem in old people's homes, from the point of view not only of the management but also of the inmates themselves. When the guest enters the home all anxiety concerning shelter, food, and care is at an end. It is a common experience in homes for the aged that the new guest is most grateful and is pleased with everything. Often, however, as time goes on, the new and luxurious sense of having all wants supplied and of being cared for, without any personal effort, wears off. Then comes the time when, unless something is supplied to occupy the time and attention of the inmate, his mind begins to center on himself, and little things begin to annoy and become magnified out of all proportion to their importance. The result, for a person of active mind, is an increasing discontent and unhappiness. The idle person whose mental processes are not so alert gradually becomes more and more apathetic, sinking perhaps into senility. Ample evidence of this was seen during the personal visits paid to some 150 homes in different sections of the country in the course of the bureau's study.

The effects of idleness upon the inmates are in turn felt by the management of the home, for discontented residents are likely to make their presence disagreeably felt, and unquestionably the senile guest is a greater care than the bright and alert one.

In many cases, however, it is to be feared that the home managements rest content when they have made the residents comfortable physically. The bureau's agent was often told, with a good deal of pride, that the guests had "nothing to do but eat and sleep"—meaning thereby that no tasks were required of them and all their wants were supplied. The possibly deteriorating effects of total idleness after years of activity were either not considered or, if considered, were dismissed as unimportant.

In some instances the idleness of the guests is due to the matron's dislike of "being bothered" by their "puttering around"; sometimes it is due to the fact that the work done is not always satisfactory. In such cases, if the home can afford hired help, this is relied upon rather than the assistance of the guests, and voluntary offers of help are discouraged.

A great many homes explain the lack of occupation as being due to the extreme age of the guests, and undoubtedly age and physical condition have to be given consideration in determining the sort of activities engaged in. However, many persons too old or too infirm to engage in any activity requiring physical effort, may nevertheless

[1] Being printed as Bul. No. 489 of this bureau. Summary data on the various phases of the study have appeared in previous issues of the Monthly Labor Review—March, 1929 (pp. 3-30); April, 1929 (pp. 1-26); May, 1929 (pp. 92-109); July, 1929, (pp. 1-21); August, 1929 (pp. 10-14); and September, 1929 (pp. 1-7).

indulge in passive occupations. Other homes find that age, in itself, is no bar to activity. One home reports: "We have men and women past 80 years who want to be doing something." Another says, "Their age seems to make no difference, as some of our best workers are in their eighties."

Other homes point out that the mental condition of the guests precludes their being taught anything new, and many emphasize the advisability of confining the activity to lines of work to which the inmate is accustomed. On the other hand, some homes (possibly in which the residents are younger, or better educated, or more alert) provide occupations which have the element of novelty. Some even have classes in new work, others are on the watch for new stitches in knitting or new designs in fancy work, etc.

The consensus appears to be, however, among those who are endeavoring to solve the problem of idleness in these homes, that the activity should be something the guest knows how to do, is interested in, and enjoys doing. It is also important that the resident should feel that the task, however small, is his own and that he is responsible for it.

In spite of many scattered cases in which the management professes no interest in the matter, the study revealed quite a large number of homes which are awake to the problem and are taking steps to provide some sort of occupation for the residents. Some rely upon simple household tasks, requiring each guest to do whatever he or she is capable of doing. Of the 1,037 homes from which data were obtained, 513 require certain light duties. Other homes feel that compulsion is a mistake and that whatever is done by the inmate should be done voluntarily. In such cases the home may offer or suggest certain lines of employment, but the acceptance is voluntary with the resident.

The activity need not necessarily be a task. Many homes are obtaining the desired results through social and recreational lines. More than two-thirds of the homes from which reports were received provide some sort of recreation. The present article, however, deals only with occupational activities.

Few homes practice what might be formally called "occupational therapy," but many encourage inmates in whatever lines of activity they take up. In the present article some attempt has been made to classify the homes according to the degree of supervision exercised by the home. These are more or less arbitrary distinctions, since the degree of interest taken by the home shades off gradually from (1) an active attempt to direct the activities of the guests along lines selected by the home and to supervise the work being done, to (2) encouragement in intangible ways, the guests being left to their own initiative in choosing and carrying out the line of endeavor, to (3) work done by the inmates absolutely independent of the home, the home's part in the matter being merely permissive.

Briefly, the study showed that those homes which are doing work along these lines are generally enthusiastic in their satisfaction with the results obtained. While a number note that some of the residents are lukewarm in the matter, others point out how this attitude can be overcome, and a very general and favorable effect upon the general health, mental alertness, and contentment of the guests is shown.

Several homes have decided to undertake occupational therapy work and a great number express an interest in it and a desire to learn what others are doing in this line.

Household Tasks

Of the 1,037 homes for aged for which data were received by the bureau, 513 require certain light duties of the able-bodied residents. In 51 cases no service is required, but voluntary assistance is accepted.

Usually, where tasks are assigned, the attempt is made to make use of the aptitudes and perhaps the previous training of the residents. This is especially apt to be the case with the male members of the home family. The man who previous to entering the home was a carpenter is given what odd jobs of carpentry are necessary, former cobblers are set to mending shoes, etc.

An astonishing variety of tasks can be found which can be done by old people. Those reported by the various homes covered a wide range of duties.

In one home an able-bodied resident assists another who is blind, helping her about the home, while another reads to her. Another able-bodied guest attends to the little needs of a paralyzed inmate.

One home reports as follows:

> Owing to the advanced years of all of our guests (each guest must be 60 years old, or over) we do not ask that any particular guest fill any one particular position. However, there are those who are active and, of their own volition, do various tasks around the homestead, as follows:
>
> One man has entire charge of the storeroom for food.
>
> One man mows various sections of the lawn.
>
> One man sees that forty-some electric clocks are wound and taken care of. That same man takes care of little odd-and-end repair jobs.
>
> Three men take care of all the loose wood around the home and on the estate and see that it is chopped and stored in the cellar.
>
> Another man has built several feed cages and perches for the squirrels. He sees that they are fed and also feeds the rabbits and pheasants.
>
> Another man sees that all the windows are closed and locked before retiring.
>
> There are two men who see that the flowers are fresh and kept on the tables in the dining room, library, and lounge room.
>
> Another man has a weeder and sees to it that all the weeds are removed from the lawn nearest the home.

Another home, whose superintendent is a man keenly interested in the problem of idleness and its results, relies upon simple household tasks for which the guests have an aptitude and interest. Thus one resident acts as librarian, another has been given a workshop in the building, several busy themselves with flowers and lawn, and one has been given charge of the mail, while several others have been made responsible for various parts of the daily vesper services.

The superintendent of another states that the residents help in office work, repair the roadways, look after the water and steam system, do any painting or general repair work necessary around the house, make butter, clean the yard, repair shoes, mow lawns, sew, mend clothes, etc.

In another home 25 or 30 of the 50 woman residents help with the kitchen work; "7 men and women supervise cleanliness and order in halls and lavatories and report; 3 men take care of the lawn; 2 of

garden, with 10 helpers; 2 have charge of flowers; 1 of chickens; 2 men run washing machines; and 2 are handy men."

In one home all of the work except the heavy cleaning and the cooking is done by the guests. Another home reports that "we need the cooperation of every inmate who is able to work on the property, gardening, landscaping, etc., besides the housework, as we have no hired help except the cook."

One home points out that "even those who are failing mentally can keep busy by hemming towels and dusters."

The household tasks at which the men were kept busy included the following:

Carpentry work:
- Putting up shelves.
- Making tables and chairs for garden.
- Fixing doors.
- Repairing chairs and other articles of furniture.
- Putting up lattice work for grape arbor.

Work in connection with farm stock:
- Milking.
- Care of animals.
- Care of poultry.

Work about yard and grounds:
- Landscaping.
- Sweeping porches and walks.
- Gardening (planting, hoeing, weeding, gathering crop).
- Watering flowers and lawn.
- Mowing lawn.
- Trimming hedge.
- Raking lawn and cleaning yard.

Inside work about building:
- Running furnace.
- Care of machinery.

Inside work about building—Contd.
- Operating elevator.
- Attending telephone switchboard.
- Answering telephone.
- Acting as librarian.
- Clerical work.
- Running washing machine.
- Running mangle.
- Plumbing work.
- Plastering.
- Tailor work.
- Shoe repair work.
- Janitor work.
- Sorting and distributing mail.
- Painting and varnishing.
- Assisting in hospital or infirmary.
- Odd jobs.
- Work in dining room.
- Barber work.
- Upholstery.

Miscellaneous:
- Running errands.
- Taking mail to post office.
- Splitting and bringing in wood.

For the women the household tasks performed included the following:

Kitchen work:
- Preparing vegetables.
- Washing dishes.
- Wiping dishes.
- Canning and preserving fruits and vegetables.
- Cooking.
- Other odd jobs.

Dining room:
- Setting tables.
- Clearing off tables after meals.
- Sweeping floor.
- Other odd jobs.

Bedrooms:
- Making own or other beds.
- Changing bed linen.

General:
- Dusting.
- Sweeping.
- Answering telephone.
- Answering doorbell.
- Sorting and distributing mail.
- Care of growing plants.
- Hanging out washing.
- Folding and sorting clean laundry.
- Mending linen.
- Mending own or others' clothing.
- Darning stockings.
- Sewing for home.

Outdoor work:
- Gardening.
- Care of poultry.

Some of the above sound rather too difficult and exacting to be performed by the elderly people found in these homes. It should be remembered, however, that the work done is usually fitful and of short duration. In many instances also, the tasks assigned or assumed voluntarily by the resident are of very simple nature. This is brought out in the following letter, which is quoted because it

shows what zest and prideful satisfaction can be got from the performance of even the slightest tasks:

> Your questions touch upon the most interesting part of the care of an institution.
>
> The little task, some certain little duty for each one, is the spice of institutional life. A little task (not long nor hard) well done and acknowledged by the superintendent or matron is a source of happiness for the inmate. The satisfaction of accomplishment goes a great ways. A little ingenuity on the part of the leader will find many little tasks. For example, one man opens and closes the windows in the vegetable cellar and watches the temperature. That keeps him from brooding about himself and his mind will not lose out. Another man sees to it that doors are opened or closed and ventilation provided for in halls, etc. I discovered that one man took great pleasure in handling a scythe. I bought one for him, and he used it all summer, 30 minutes to an hour a day, making hay, which we use for chicken nests and scratch-room. * * *
>
> After dishes are washed and placed on the tables for the next meal, several women choose to walk up and down the aisles to see that all are placed in the best order. After all is arranged correctly, smiles and cheerfulness are obvious—a taste for beauty.
>
> One lady asked permission to water the flowers; useless to say that this was cheerfully granted. She not only did this but kept the dining room supplied with nice bouquets all summer to her own and our delight.
>
> It seems a necessity to supply inmates with little jobs. This implies two difficulties for those in control: The one is to find a task for each, enough to go around; the other is the pleasant difficulty (permit that way of expressing it) of finding for each what he or she likes to do.

Other Occupations Directed by Home

COMPARATIVELY few homes make any active effort to arouse the interest of the residents in healthful occupations other than the regular household tasks. Thus only 36 institutions were found which carry on what may be definitely classed as occupational therapy work in other lines.[2] Several soldiers' homes reported that such work is done. In one such home there are a number of aides who direct the residents in basketry, weaving, leather work, woodworking, batik work, painting furniture, making beadwork, weaving tapestry, etc. In another the residents do weaving and make rugs, in another work along some definite trade, and in a third reed and cane work, weaving of textiles, leather work, bookbinding, and bead work. A church home has an occupational director who assists and directs the voluntary work of members in the making of articles to be sold at the annual fair held by the home; this home also allots small plots to those who wish to raise flowers. In another the guests are instructed in rug making, embroidery work, crocheting, and knitting. In another institution attempt is made to interest the guests in basketry, making hooked, braided, and rag rugs, table runners, weaving cloth for hand bags, etc. Another encourages handicraft work of various sorts, and fancy work. A Presbyterian home has engaged an instructor who comes once a week to teach those guests who are interested, in basketry, weaving, and other handicraft work.

A Catholic home, which takes women only, makes an effort to obtain the latest patterns and stitches in crocheting and knitting. In another home the interest of the old ladies has been aroused in the soldiers' hospital and they knit for the inmates of that institution and for the Grenfell Mission in Labrador. A third institution

[2] Seven others are planning to undertake such work in the near future; another thinks it a "desirable thing to do but we have no money to employ a trained director and can not find a suitable volunteer."

has tried to teach the ladies basket making and fancy sewing; those who have special aptitudes or interests are encouraged along the lines of their interest.

A private home in New England supplies the guests with materials for needlework, millinery, dressmaking, and artcraft, as well as literature for the study of religious and scientific subjects. A home in the Middle West teaches weaving, beadwork, decoration of vases and jars, gardening, and sewing. In another home in the same State the guests who are interested are directed in upholstery and rug weaving. A fourth home has a carpenter shop for the men, while the women make rugs; in the summer all are encouraged to work in the flower and vegetable gardens. Two homes have toy shops which furnish occupation for the men. A Methodist home in New Jersey encourages knitting, crocheting, and carpet weaving, as well as "stimulating the idea of assistance to other residents."

A Minnesota home reports that "inmates inclined to be restless or of a melancholy state of mind are encouraged to do work to their liking; the work is never compulsory."

A somewhat unusual direction is taken in a home in New York which trains "those who care to do so in the giving of plays for the family and their friends, with very good success." Another home has a committee which plans the work for an annual fair held by the home, and the articles to be sold are made by the guests under its direction, all service so given being voluntary on the part of the inmates. Another home has regular classes in fancy sewing, arts and crafts work, landscaping, and gardening.

A home all of whose guests are deaf has recently been making a special effort to interest them in some sort of work. Not only is this especially desirable in such cases, since deaf persons (and some of these are mute and blind as well) are cut off from many enjoyments and pursuits open to normal persons, but the task of training is unusually difficult due to their handicaps. However, one man who is blind, deaf, and mute has been taught how to cane chairs and is allowed to take orders from outsiders. Part of the money so earned is kept by the home while the remainder becomes the property of the inmate. Another is doing furniture repair work as well as considerable cabinetwork, and another is a painter. The superintendent reports that now "the ladies are asking for extra work. Some of them assist with the housework. One weaves rugs and has sold some. She likewise gets a per cent of her income. Another does sewing. Each of these only work a few hours each day. * * * We are now planning for a display room for the things they make, to aid them to sell their wares to their visiting friends." In another home whose inmates are also deaf a man is being taught chair caning, and the home has a small loom for weaving rugs. The matron reports, however, that little can be done for the women because of advanced years and poor eyesight.

Basket making, sewing, and fancy work are the lines along which interest is being directed in one institution, while another specializes in lace making, needlework (fancy aprons, dressing dolls, piecing quilts, etc.), and rug making. Another home had a paid occupational therapist for this work, but is now trying an untrained volunteer worker. The guests learn to use the loom for weaving, learn needle-

work of various kinds, make bed quilts, etc. In a Maryland home the guests do painting (art work), sewing, knitting, and embroidery. In another home the guests take turns planning the program of entertainment during the winter months.

Two homes, both of which take both sexes as guests, nevertheless are doing occupational therapy work only for the men. It is interesting to note in this connection that other homes find the men the more difficult to interest in work of this sort.

Voluntary Occupations (other than Housework) Encouraged by Home

IN MANY homes, some or all of the residents (who are physically or mentally able) are encouraged to carry on whatever line of activity interests them. Even though no formal attempt is made by the home to direct these activities, the guests do receive certain inducements to continue them. In some instances the home provides a room or a cabinet where articles made by the home family may be displayed for sale. Quite a number of homes hold annual fairs or bazaars at which home products are offered for sale, the maker receiving part or all of the proceeds. This gives the guests something to look forward to and to work for. The annual report of one home of this class describes the work done for the bazaar as follows:

Mrs. R. cuts and plans all quilts and most of the linens, crochets, hemstitches, sews, and does drawn work; 80 years of age.

The late Miss T. quilted on 30 quilts, of which she did 10 alone, tied 4 quilts, and joined 6, stitched the bindings once around on 22 quilts (by machine); 82 years of age and very poor eyesight.

Miss W. made four hooked rugs, which were sold before they were finished, assisted in quilting most of the quilts, crocheted two very large and beautiful corners for a table runner, and assisted in other ways.

Mrs. R. assists with the quilts and general sewing and hemstitching.

Miss P. crochets many corners for the linen pieces.

Miss R., though nearly blind, makes rag rugs.

Miss B. makes rag and braided rugs.

Mrs. Q. and Miss C. make tatting.

Miss H. takes charge of the pillowcases, makes the same, and embroiders.

Miss P. embroiders and makes aprons.

Mrs. P. makes aprons and does plain sewing.

Miss McK. crochets afghans, baby articles, and pieces quilts.

Miss E. McK. makes silk quilts and does very fine sewing.

Miss W. pieces quilts and makes herself generally useful.

Miss W., sr., crochets pillowcase lace.

Mrs. B. crochets lettuce bags.

Miss L. is unable to work at present, but has hemstitched and crocheted.

The late Miss W. made very artistic silk quilts, knit baby blankets, and embroidered.

Mrs. R. knits baby articles and sweaters.

Mrs. M., before she became totally blind, knit horse reins.

Mrs. C. made porch pillows.

Miss L. pieces quilts.

Miss W. pieces quilts.

Mrs. G. does machine sewing.

Mrs. S. hems and does very fine sewing.

Mrs. B., with almost helpless fingers, makes very pretty buffet sets with corset lace.

Mrs. W., Miss G., Mrs. G., Mrs. A., Mrs. E., and Mrs. G., do plain sewing and piece quilts.

Miss Van V. solicits from her friends and usually has a very good collection of fancy articles.

Mrs. F. braided rugs and pieced velvet quilts.

Mrs. W. pieces silk quilts.

One home in Illinois reports as follows:

> Probably our activities could not be classified as occupational therapy, yet they are of unmistakable value. Provision is made for the ladies to do personal and household sewing and this is carried on to a considerable extent. Arrangements have been made for one lady to carry on her work of art in which she has some proficiency. The men are encouraged to participate in the vegetable and flower gardening. Handwork done throughout the year is placed on exhibit in an annual bazaar and has been a source of much interest among the women. All of this work is voluntary.

In another case the officers unofficially see to it that those who wish to do fancy work or other work are supplied with materials therefor. In another case the home has set aside a space as a shop for an inmate who was formerly a tailor; he does some repair work for the home and also earns a little by doing repair work for nonresident friends. So far as possible the home urges each guest to do something in his own line. "One blind and deaf woman whiled away many happy hours crocheting rag rugs which were readily sold to visitors to home and at our annual bazaars." In another institution the woman residents do quilting and fancy work which the home sells for their benefit. Still another encourages the residents to take orders for any light sewing or mending that can be done at the home. Some of the residents of one private home have, with the encouragement of the management, become interested in sewing for hospitals, while a few do fine hemstitching and others make rugs.

Informally, another home favors the activities of the guests, and the matron reports that the articles made by them include "some lovely crocheted silk mats, braided wool mats, coats and dresses altered and repaired; crocheted and knitted work such as infants' sacks and caps, edgings, etc.; wool cross-stitch work, embroidery, and bed quilts, holders and aprons." In another home some of the residents make lace or piece quilts, the home providing the materials.

A home for actors reports that the guests are encouraged to follow any hobby they may have or any line of endeavor they may be interested in. "Occasionally one does. One paints in oils, another has a flower garden, one takes charge of the radio, another the pool room, etc."

Voluntary Occupations Carried on Independently of Home

A CHURCH home reports that some of the women do needlework which they sell to their friends. Another allows a few who are able to do so to go out for an occasional day's sewing. A third states that most of the inmates are too old and feeble to do anything, but continues "we have one bright younger woman, confined to a wheel chair, who does much fancy work, tinting of cards, embroidery, reed work, etc. She also operates a doctors' exchange." In another home, "friends bring them patches and pieces which they like to make up into pillow tops, comforters, etc."

Three inmates of a New England home make patchwork quilts and two of these also braid rugs to sell. Some of the residents in another home in this section knit for the Red Cross, and those of a third for the Seamen's Institute, while those of a fourth sew for the children's home. Another home, which has 23 women in its care, reports that two of these take in sewing from workrooms connected with churches.

The matron of a colored home reports that the guests "do mending and sometimes sew for outsiders, thereby earning a little money for themselves." The women in one Missouri home take in stockings to darn. Another home reports: "A few of our residents having been dressmakers before entering the home, do sewing for the other residents, and have been allowed to sew outside the home. * * * The men do not as a rule have a trade which they would be able to use outside the home."

The superintendent of a New England home for men reports that some of the guests are employed occasionally by the neighbors to do odd jobs in caring for a garden or to mow a lawn. Some of the inmates of a sailor's home make models of ships for sale, while others make hammocks, shopping bags, etc., of cord.

Several homes report that certain inmates earn a little pocket money from time to time by staying with children whose parents have gone out for the evening. One of these allows guests to do various kinds of work for persons outside the home, "providing they do not engage in work regularly or too often."

One home, which is run in connection with a hospital, reports that some of its old people roll bandages for hospital use, and one or two of the men who were formerly tailors occasionally do some work for the others in the institution; one man does some bookbinding. Four of the residents in another institution write articles for magazines and papers, one sends clippings to a clipping bureau, and several others go out occasionally to care for children.

Perhaps the greatest variety of occupations is reported by a Middle West home some of whose "ladies earn extra income by knitting bootees, and other forms of needlework, which helps take up the time. Others go out caring for children, take care of town houses during absence of family from the city, nursing, typing, social secretarial work, lodge jobs, etc. One woman is a genealogist; another is a dressmaker."

Requisites of the Occupation

EACH HOME was asked what, in the opinion of the management, were the requisites of successful work along occupational therapy lines, and what sort of occupations were found to have the most satisfactory results. Perhaps the largest single group of replies stressed, as the chief essential of the task, that it be either something for which the resident was especially fitted, or something which he or she was used to doing. One superintendent was of the opinion that the most satisfactory task would be one along the lines of "the work followed by the inmate in his wage-earning days." Another requisite emphasized was that the work must be something in which the guest is interested, and which he enjoys doing.

Several homes point out that interest in various activities can be stimulated by offering inducements of various sorts. Thus one home provides a lunch morning and afternoon for those who are performing tasks. In another home which cares for both children and old people, all of the mending for the children is done by the old people. The old ladies gather, some sort of refreshment is provided, and an enjoyable social time results, the work being done as a sort of by-product.

A great many homes, as already pointed out, hold annual fairs or bazaars at which articles are sold, including those made by the members of the home family. Several reports stress the desirability of allowing the members who have contributed articles to the sale to receive all or part of the money realized, and one of these states that the residents "are eager to work at anything they may do to get money." Another says, "We do find that our people are brighter, happier, more alert mentally and less complaining of physical ills when they are kept busy with work in which they are interested and from which they expect to receive a little spending money. This last point we find important and they are allowed to have a little sale of their own twice a year."

Other opinions as to the most desirable types of activity follow:

> For health, as much that is physical exercise as possible. For pleasure, articles for sale which they have strength and taste for.
>
> Something that requires skill.
>
> Any straight-ahead work that does not require very much planning in doing.
>
> Any hobby that appeals to them and for which they are fitted. If blindness comes on, I have found learning the "Moon type" an interesting diversion and later, if proficient, a great comfort for old people. They can not only enjoy it themselves but read aloud to other blind people who are not capable of learning it.
>
> Any kind of task, not too strenuous, that can be done in their own room without much physical labor.
>
> Something that appeals to the sense of beauty. Something colorful. Making something out of nothing. Nothing which requires much thought.
>
> Something they like to do. They do not like to be made to do a thing, but let them think they are doing what they like and they are happier.
>
> Tasks that interest the individual and show results that can be honestly admired.
>
> Something producing a "pretty" result, and not requiring eye-strain.
>
> Those [activities] suited to their temperament, ability and habit. Nothing, though, which demands mental exertion.

The psychological effect upon the residents is stressed by several homes which point out the value of making the old people feel they are helpful and still of use in the world.

One superintendent states it as his opinion that the occupation should be such that the residents "do not come in too close contact with each other"; another that the personal preferences of the resident should govern in the activity selected. "Any little task that the inmates like and are able to do, a job not too long or tiresome—an hour a day average" is recommended by a third home. Others set, as the chief requisite for the employment, that it be "light," "suited to bodily condition, taking into account old eyes, fingers, etc." outdoor work as far as possible, "not too hard on the eyes," "not too strenuous," "not too hard and yet carrying a certain amount of responsibility," etc. Several, in fact, stress the element of responsibility as being desirable, regardless of however slight the task may be. Thus one says: "Those who are able and willing to work are assigned duties to keep the 12 acres of grounds surrounding the home in neat and proper condition, each one having a particular job to perform and being allowed to use his own judgment in the performance of the work, with some supervision, of course, from the managing committee."

Somewhat along this line is the opinion of another home which recommends "out-of-door work, and work which creates a proprietary interest." Another feels that when a task is given to a resident

either at his request or at the initiative of the home, the job should be regarded as his own: "We find that most old people like to have a special job. So far as possible we let them choose their jobs and most of their tasks are self-appointed."

Attitude toward Occupational Therapy

By Management

THE MANAGEMENTS of those homes which are either actively directing occupational therapy work or are encouraging the voluntary selection of some line of activity by the guests are almost universally enthusiastic as to the results, physical and mental, upon the residents. One superintendent remarks that "enforced idleness is a real problem in this kind of work." Some of the comments as to the results of efforts to provide "busy" work for the residents follow:

It keeps them more interested in the affairs of life and depended upon, instead of becoming too dependent.

Regular work seems to give a much more normal outlook on life, and there is usually a decided improvement in patients under this treatment.

It gives them something to think of besides their aches and pains, and brings them together.

It keeps them from thinking on the dark side of life and helps to get all they can out of the present.

It certainly stimulates their interest. Those who, on account of disability, can not work, settle down to a kind of apathy. The workers are more alert.

We feel that they are more contented and more alert mentally, as well as being in better health. * * * We have been in charge of this work less than a year, but we can see a considerable difference in our residents when they have nothing to do.

Any work keeps them happier and less quarrelsome.

It keeps the inhabitants better physically and lengthens their lives.

We have less trouble, and less complaining from those who work, and we find that they are more healthful and contented.

I am very sure they are much happier when permitted to do something. This is my experience for the last 12 years.

The ones who do this work are the only contented ones here.

[Beneficial] especially if permitted to retain money obtained through sale of articles they make.

We have a few who will do nothing. They are the ones whose minds go.

It makes them happier to feel they are still of some use.

[Beneficial] when they do it voluntarily or are let think it their own idea.

It is noticeable that the busiest ones are also the most alert and intelligent.

My conviction is, occupation of an interesting nature is most essential to mental alertness.

In entering a home, all care is dropped and unless something is provided to take its place, introspection begins, and worry over physical ills and death, and unhealthy mental processes follow. Interesting work may keep them mentally sane.

There is no doubt but what activity keeps the residents happier and more contented.

Great rivalry exists between the men to keep the grounds at the peak of perfection. There have been many heated arguments as to who was entitled to the honor of mowing the lawn, clipping the hedges, or caring for the flower and vegetable gardens. This competitive spirit has been productive of a lawn with velvety texture, a hedge trimmed as neatly and evenly as an actor's hair, and gardens that have supplied the table with a variety of fresh vegetables.

[Occupation] reduces to a minimum the cases of mental defectives.

We have the least trouble with those that labor some.

Our workers are in better condition, mentally and physically, but our workers are very few in number.

Work aids in keeping mental condition satisfactory.

An old lady at the age of 80 years entered our home from a small town out in the State, where she had lived all her life. The first weeks would certainly have been very sad and lonely if she had not become deeply interested in work—entirely new to her—which the occupational therapy teacher persuaded her to try. Her work was well done and the articles sold readily. It pleased her that she was able to earn a little pocket money, the home deducting only cost of material when articles are sold. Another old lady bordering on a condition of melancholia was given rose-colored wool and taught to make baby blankets of the simplest pattern. She liked the pretty wool and when the first blanket was sold and she had an order for another she was cheered and encouraged. She is now in normal mental condition and we feel that the work helped at least a little toward her recovery.

The only unfavorable reports are given below. It will be noticed that the first two reports view the problem from the point of view of the quality of the work performed by the residents rather than of the effects of activity upon the inmates themselves.

This work is given to members who are able to work part time. The members do about two-thirds of the work around here and it does not prove satisfactory.

I find they are more in the way than good.

Occupational therapy has been tried out here but without much success.

As an experiment, we employed a vocational worker for a short time, to interest our old ladies, but it was not a great success.

We believe it makes them dissatisfied.

It did not prove to be generally satisfactory.

By the Residents

The attitude of the residents varies from home to home. Some superintendents report that great interest is shown by the guests, others that they are either indifferent or resentful. Some of the comments on this point are given below:

Most of our inmates resent being asked to do the merest trifles.

Most of them are worn out from hard work and say they come here to rest.

It is difficult to find work or interesting occupation for our old men. They do not take much interest in the occupational therapy, though one man did learn to make table mats and another made one or two hooked rugs.

When they are examined for entrance into the home, they are asked if they are willing to help with light work and their answer is in the affirmative. * * * After they have been placed on the membership list, it is astonishing how many lame joints, weak stomachs, effects of previous operations, etc., seem to develop.

[We receive only] limited cooperation from our members.

They become easily tired and we do not ask them to do much.

They seem to have no desire for any work. Want to sit around and rest.

We do not make any attempt to provide any means of occupation for the members of this home. * * * I tried to get them interested in a flower garden or something of the sort, more for their welfare than anything else, but the members have the idea that they came to this home to die and not to work, so we let them do as they like.

It is a job in itself to induce them to work at something. Most of them prefer to do nothing. A few do it willingly.

Fair work is all we have been able to interest them in.

The old ladies piece quilts which are sold at an annual bazaar and bring about $10 each. It is more difficult to induce the men to do anything along this line. They demand immediate payment.

The women are quilting, making fancy work which is sold for their benefit. The women are very ambitious to earn money for their little expenses. * * * The men do not want to work.

We think the members of our family enjoy this work, and that it helps them by giving them something to do. Most of them like sewing best—making dolls, quilting, fancy work, etc. They do not seem to care much for basket making.

Our guests help with everything in the home the same as they would be doing in their own homes, and they are happy and contented.

They take a great interest and often donate money to the home.

The occupations offered seem to interest them very much.

Except for a few, we have found it rather difficult to obtain help from the inmates to do the necessary work in and about the home, and requests to do some little job have been met very grudgingly. However, by calling all the inmates together and outlining the work that is required to be done, we have found better response. We then let them choose their jobs, and make them understand that we look to them to see to it that the job is taken care of. This way a great deal of enthusiasm and interest for the home have been shown by the inmates. They are not willing to work under a boss, or to work together, but if responsible for a job, they take great pride in doing it well. If at intervals we change jobs, which may have to be done because of their physical condition, they seem to endeavor to do the work a little better than their predecessor.

Union Wage Rates in Time-Work Trades in 1929

UNION wage rates in 1929 were, on the average, slightly higher than in 1928, and higher than in any preceding year, according to the annual survey recently completed by the Bureau of Labor Statistics, covering 786,010 organized workers.

The present article covers the principal time-work trades—bakery trades, building trades, chauffeurs, teamsters and drivers, stone trades, laundry workers, linemen, longshoremen, and printing trades—in 67 important industrial cities.[1] There are many trades whose members are employed wholly or mainly on piecework, but these frequently have a multitude of rates which are practically impossible to incorporate in a general tabulation and difficult to understand by anyone not familiar with the particular industries, and are therefore not included in the present tabulation. The rates for street-railway motormen and conductors and bus drivers have likewise been omitted from tabulation this year because their hours of labor are not uniform or susceptible of presentation in the same manner as the trades above enumerated. The data for street-railway employees, pieceworkers, and employees in other occupations that do not readily lend themselves to the general tabulation will be published later.

The average hourly rate in 1929 for all trades covered was $1.204 as compared with $1.195 in 1928, or an average increase of 0.9 cent an hour. Of the 72 individual time-work trades covered by the survey, 58 showed increases in average wages per hour in 1929 as compared with 1928, 1 showed no change in rate, and the remaining 13 showed decreases. The average rates in the principal trade groups are shown in Table 1.

TABLE 1.—AVERAGE HOURLY WAGE RATES IN SPECIFIED TRADE GROUPS IN 1929 AS COMPARED WITH 1928

Trade group	Average hourly wage rate		Increase, 1929 over 1928
	1928	1929	
Bakers	$0.954	$0.979	$0.025
Building-trades workers	1.330	1.352	.022
Chauffeurs and teamsters and drivers	.712	.715	.003
Granite and stone cutters	1.335	1.369	.034
Laundry workers	.447	.458	.011
Linemen	1.007	1.019	.012
Longshoremen	.858	.863	.005
Printing and publishing:			
Book and job	1.036	1.049	.013
Newspaper	1.220	1.241	.021
Average, all trades	1.195	1.204	.009

The reduction in hours of labor from year to year has been almost as continuous as the increase in rates per hour, and the year 1929 was no exception, showing as it did a reduction of four-tenths of 1 per cent from 1928. In earlier years the decrease in hours was brought about mainly by reductions in those trades working more

[1] Preliminary data on 20 trades in 40 cities were given in the September, 1929, Labor Review (pp. 144–167).

than eight hours per day or six days per week. Later the reduction was due to the increasing prevalence of the short day on Saturday (making a 5½-day week); at present, reductions are due to the increasing number of trades working a 5-day week. Painters and plasterers, with an average of 41.4 hours, have the shortest working week, while teamsters and drivers, with 55.3 hours, have the longest working week. (Table 4.) Table 2 shows for 1929 the average hours worked and the per cent of members in each trade group working specified hours.

TABLE 2.—PER CENT OF TRADE-UNION MEMBERS IN SPECIFIED TRADE GROUPS WORKING EACH CLASSIFIED NUMBER OF HOURS PER WEEK, MAY 15, 1929

Trade group	Average hours per week	Per cent of members whose hours per week were—									
		40 and under	Over 40 and under 44	44	Over 44 and under 48	48	Over 48 and under 54	54	Over 54 and under 60	60	Over 60
Bakers	47.2	------	11.0	0.3	7.1	79.4	0.1	2.0	------	------	------
Building trades	43.1	25.2	------	72.0	1.5	.9	.2	.1	(1)	------	------
Chauffeurs and teamsters and drivers	54.0	.3	.4	1.3	.7	22.0	11.7	24.0	12.4	25.1	2.1
Granite and stone trades	43.9	2.2	------	97.7	------	------	.1	------	------	------	------
Laundry	48.0	------	------	------	------	100.0	------	------	------	------	------
Linemen	46.4	3.1	------	46.3	1.4	31.3	16.1	1.2	.6	------	------
Longshoremen	44.7	------	------	85.8	------	13.2	------	------	.9	------	.1
Printing and publishing:											
Book and job	44.3	.2	.1	91.6	.1	8.0	------	------	------	------	------
Newspaper	45.0	6.2	10.7	11.2	43.0	28.9	------	------	------	------	------
Average	44.8	17.0	.7	62.2	2.9	8.0	1.6	2.9	1.4	2.9	.2

[1] Less than one-tenth of 1 per cent.

Trend of Union Wages and Hours

As TABLE 3 shows, the average hourly union wage rate on May 15, 1929, was higher than in any preceding year, being slightly more than one-half of 1 per cent higher than on the same date in 1928, 129.6 per cent higher than in 1917, 162.1 per cent higher than in 1913, 177.5 per cent higher than in 1910, and 192.1 per cent higher than in 1907. In other words, union wage rates per hour were nearly three times as much in 1929 as in 1907 and nearly two and five-eighths times as much as in 1913.

Figured on the weekly basis, the rates in 1929 were one-tenth of 1 per cent higher than in 1928, 114.1 per cent higher than in 1917, 140.7 per cent higher than in 1913, 152.8 per cent higher than in 1910, and 163.0 per cent higher than in 1907. Because of reductions in hours of labor, weekly rates have not increased to the same extent as hourly rates. In 1929 the regular hours of labor were four-tenths of 1 per cent lower than in 1928, 7 per cent lower than in 1917, 8.5 per cent lower than in 1913, 9.5 per cent lower than in 1910, and 10.8 per cent lower than in 1907.

The index numbers shown in Table 3 are computed on the basis of 1913 as 100. These indexes include all the time-work trades and all cities covered in preceding years, but the number of trades and cities included in the data has varied from year to year.

TABLE 3.—INDEX NUMBERS OF UNION WAGE RATES AND HOURS OF LABOR IN THE UNITED STATES AS OF MAY EACH YEAR, 1907 TO 1929

[1913=100]

Year	Index numbers of—			Year	Index numbers of—		
	Rate of wages per hour	Hours per full-time week	Rate of wages per full-time week		Rate of wages per hour	Hours per full-time week	Rate of wages per full-time week
1907	89.7	102.6	91.5	1919	154.5	94.7	147.8
1908	91.0	102.1	92.5	1920	199.0	93.8	188.5
1909	91.9	101.9	93.3	1921	205.3	93.9	193.3
1910	94.4	101.1	95.2	1922	193.1	94.4	183.0
1911	96.0	100.7	96.5	1923	210.6	94.3	198.6
1912	97.6	100.3	97.7	1924	228.1	93.9	214.3
1913	100.0	100.0	100.0	1925	237.9	93.0	222.3
1914	101.9	99.6	101.6	1926	250.3	92.8	233.4
1915	102.8	99.4	102.3	1927	259.5	92.4	240.8
1916	107.2	98.8	106.2	1928	260.6	91.9	240.6
1917	114.2	98.4	112.4	1929	262.1	91.5	240.7
1918	132.7	97.0	129.6				

Because of the wide interest in building operations and the resultant inquiries to the bureau for wage changes in building trades as a group, the data for these trades are given below.

Index numbers of union wage rates in the building trades

	Index number		Index number
1913	100.0	1922	187.5
1914	101.9	1923	207.3
1915	102.8	1924	224.0
1916	106.2	1925	232.7
1917	112.8	1926	248.0
1918	125.2	1927	256.7
1919	145.4	1928	258.1
1920	196.8	1929	261.6
1921	200.3		

Table 4 shows the average union wage rates per hour, average full-time working hours per week, the number of returns on which 1929 averages are based, and index numbers of hourly rates for the years 1924 to 1929. The index numbers for the years back to 1907 may be found in Bulletin No. 482 of this bureau, but are omitted here for want of space. For some trades data were not collected as early as 1913, hence there can be no index numbers for them on a 1913 base.

In computing an average rate, each rate quoted is multiplied by the number of union members having such rate. The products are added and the sum divided by the grand total membership; in other words, the rates are weighted by the number of union members. This membership is furnished the bureau for this sole purpose and is held strictly confidential.

The rates for a city may enter into an average one year because the trade has an effective wage scale, but may drop out the next year because the trade can not enforce its scale or because the union has disbanded. Also, the membership fluctuations in high or low rate cities have an important bearing on this weighted average rate.

The grand average rate may, possibly, vary to a greater extent than the rate in any city reporting for both years or it may show a decrease while the individual rates composing it may show no change and some increases. The index numbers are computed from these averages. In Table 4 hourly rates only are considered. Equivalent weekly rates do not exactly parallel hourly rates because of changes in working hours.

TABLE 4.—AVERAGE WAGE RATES PER HOUR, 1928 AND 1929, AVERAGE FULL-TIME HOURS PER WEEK, 1929, AND INDEX NUMBERS OF HOURLY RATES FOR SELECTED YEARS BASED ON 1913

Trade	Number of quotations, May, 1929	Average rate of wages per hour		Index numbers of rates of wages per hour (1913=100)						Average hours per week, May, 1929
		May, 1928	May, 1929	May, 1924	May, 1925	May, 1926	May, 1927	May, 1928	May, 1929	
Bakery trades										
Bakers	270	$0.954	$0.979	283.5	293.4	277.2	286.8	285.9	293.4	47.2
Building trades										
Asbestos workers	39	1.317	1.378	(1)	(1)	(1)	(1)	(1)	(1)	43.5
Bricklayers	67	1.617	1.657	202.2	213.4	226.4	231.9	233.9	239.7	42.6
Sewer, tunnel, and caisson	14	2.059	1.917	167.3	187.1	199.2	218.6	214.3	199.5	43.3
Building laborers	49	.858	.862	242.4	231.6	254.9	255.8	257.0	258.2	44.7
Carpenters	67	1.315	1.339	218.3	222.8	238.4	246.7	247.5	252.0	43.7
Millwrights	16	1.292	1.244	(1)	(1)	(1)	(1)	(1)	(1)	43.0
Parquetry-floor layers	19	1.342	1.375	222.0	215.7	253.1	250.2	236.1	241.9	43.6
Wharf and bridge	19	1.304	1.293	(1)	(1)	(1)	(1)	(1)	(1)	43.9
Cement finishers	61	1.366	1.366	211.4	212.6	226.9	236.8	234.6	234.6	43.8
Composition roofers	35	1.333	1.358	(1)	(1)	(1)	(1)	(1)	(1)	43.8
Helpers	5	.803	.795	(1)	(1)	(1)	(1)	(1)	(1)	43.6
Elevator constructors	46	1.447	1.450	(1)	(1)	(1)	(1)	(1)	(1)	43.8
Helpers	45	1.052	1.043	(1)	(1)	(1)	(1)	(1)	(1)	43.8
Engineers, portable and hoisting	121	1.436	1.430	197.2	205.7	217.2	224.2	233.5	232.5	44.7
Glaziers	33	1.337	1.358	(1)	(1)	(1)	(1)	(1)	(1)	43.5
Hod carriers	44	1.027	1.072	224.9	251.5	273.8	280.4	280.7	293.0	41.7
Inside wiremen	63	1.408	1.468	220.5	232.4	244.6	255.0	257.2	268.2	42.7
Fixture hangers	11	1.222	1.253	221.8	220.8	234.7	232.7	235.8	241.8	43.5
Lathers:										
Piece work	21	[2] 9.457	[2] 9.717	(1)	(1)	(1)	(1)	(1)	(1)	40.8
Time work	66	1.496	1.484	215.1	234.5	240.6	250.3	251.0	249.0	43.0
Marble setters	50	1.455	1.558	186.1	190.0	212.3	217.0	218.0	233.4	44.0
Helpers	15	1.001	1.061	234.3	222.5	246.7	245.2	248.0	262.8	43.9
Mosaic and terrazzo workers	24	1.351	1.417	(1)	(1)	(1)	(1)	(1)	(1)	43.9
Painters	66	1.372	1.369	230.5	243.1	257.5	265.4	270.8	270.2	41.4
Fresco	9	1.235	1.258	194.1	220.0	220.1	245.1	226.7	231.0	41.6
Sign	44	1.568	1.583	239.2	241.5	240.4	247.2	247.5	249.9	41.8
Plasterers	66	1.632	1.612	216.1	219.8	236.1	241.0	241.6	238.6	41.4
Laborers	42	1.086	1.090	227.8	243.1	257.2	259.7	264.1	265.0	42.4
Plumbers and gas fitters	66	1.439	1.450	202.4	206.6	222.7	227.2	232.1	233.8	43.5
Laborers	12	.965	1.043	(1)	(1)	(1)	(1)	(1)	(1)	44.0
Sheet-metal workers	52	1.305	1.355	221.7	229.3	244.8	252.2	247.4	256.9	43.8
Ship carpenters	8	.900	1.111	(1)	(1)	(1)	(1)	(1)	(1)	44.1
Slate and tile roofers	24	1.538	1.554	(1)	(1)	(1)	(1)	(1)	(1)	43.5
Steam and sprinkler fitters	80	1.435	1.444	201.5	212.2	229.7	236.2	239.5	241.0	43.6
Helpers	37	.967	.954	266.0	273.7	289.7	302.8	309.2	305.0	43.8
Stonemasons	57	1.583	1.627	225.2	229.5	253.1	256.0	259.3	266.6	42.7
Structural-iron workers	74	1.465	1.467	202.5	204.5	218.5	235.5	235.7	236.0	43.8
Finishers	36	1.431	1.492	193.7	197.9	220.7	228.5	230.2	240.0	43.8
Tile layers	57	1.453	1.469	197.5	202.3	212.0	221.9	221.8	224.2	43.7
Helpers	16	.999	.984	242.2	248.9	269.8	272.9	278.5	274.3	43.8
Average, building trades	1,676	[3] 1.330	[3] 1.352	224.0	232.7	248.0	256.7	258.1	261.6	43.1

[1] No data for 1913. [2] Per 1,000 laths. [3] Not including pieceworkers.

TABLE 4.—AVERAGE WAGE RATES PER HOUR, 1928 AND 1929, AVERAGE FULL-TIME HOURS PER WEEK, 1929, AND INDEX NUMBERS OF HOURLY RATES FOR SELECTED YEARS BASED ON 1913—Continued

Trade	Number of quotations, May, 1929	Average rate of wages per hour		Index numbers of rates of wages per hour (1913=100)						Average hours per week, May, 1929
		May, 1928	May, 1929	May, 1924	May, 1925	May, 1926	May, 1927	May, 1928	May, 1929	
Chauffeurs and teamsters and drivers										
Chauffeurs	422	$0.706	$0.709	205.6	223.5	226.3	242.1	243.2	244.2	53.5
Teamsters and drivers	171	.727	.734	244.7	254.3	256.6	269.1	277.1	279.8	55.3
Average, chauffeurs, etc.	593	.712	.715							54.0
Granite and stone trades										
Granite cutters	60	1.256	1.279	214.2	216.8	244.1	242.6	245.3	249.8	43.9
Stone cutters	48	1.406	1.472	212.9	221.9	241.9	241.2	242.2	253.6	44.0
Average, granite and stone trade	108	1.335	1.369							43.9
Miscellaneous trades										
Laundry workers	47	.447	.458	(1)	(1)	(1)	(1)	(1)	(1)	48.0
Lineman	44	1.007	1.019	(1)	(1)	(1)	(1)	(1)	(1)	46.4
Longshoremen	43	.858	.863	238.5	239.9	242.0	236.7	248.6	250.1	44.7
Printing and publishing: Book and job										
Bindery women	48	.525	.529	247.6	250.5	235.6	251.5	252.9	254.9	44.8
Bookbinders	83	.991	1.002	233.9	236.6	240.8	246.0	244.8	247.5	44.6
Compositors	66	1.121	1.127	238.5	237.4	242.1	246.6	250.1	251.5	44.0
Electrotypers	56	1.232	1.261	250.6	249.7	252.2	255.2	257.1	263.2	45.3
Machine operators	61	1.170	1.188	212.9	211.7	215.2	223.0	224.6	228.0	43.9
Machine tenders (machinists)	25	1.178	1.195	214.4	210.4	219.9	227.1	216.8	219.9	44.0
Machinist-operators	35	1.069	1.125	171.6	183.7	179.2	189.6	176.6	185.7	43.9
Photo-engravers	49	1.312	1.331	(1)	(1)	(1)	(1)	(1)	(1)	44.0
Press assistants and feeders	147	.842	.850	263.8	278.8	281.9	285.3	287.0	289.7	44.3
Pressmen:										
Cylinder	162	1.130	1.150	223.1	225.9	230.5	230.8	232.7	236.8	44.3
Platen	115	.925	.939	242.9	244.3	255.8	258.3	253.9	257.8	44.5
Average, book and job	847	1.036	1.049							44.3
Printing and publishing: Newspaper										
Compositors:										
Day work	84	1.176	1.203	189.0	193.9	196.7	201.8	206.6	211.3	45.5
Night work	77	1.311	1.326	187.5	187.4	193.4	199.7	203.0	205.3	44.9
Machine operators, day work:										
Piece work	9	[3].154	[3].138	117.8	135.8	138.5	134.9	138.5	124.1	44.4
Time work	87	1.204	1.224	193.4	198.0	201.6	208.9	213.8	217.4	45.1
Machine operators, night work:										
Piece work	9	[3].154	[3].147	110.9	113.7	118.6	112.3	108.1	103.2	40.0
Time work	75	1.326	1.336	186.4	189.5	195.7	196.9	205.9	207.5	44.8
Machine tenders (machinists):										
Day work	67	1.167	1.186	191.5	185.3	185.2	194.4	198.4	201.7	45.6
Night work	60	1.300	1.340	183.0	178.4	176.5	187.1	190.8	196.6	45.2
Machinist-operators:										
Day work	9	1.082	1.048	180.7	178.7	171.9	177.2	179.2	173.5	47.0
Night work	7	1.210	1.189	164.5	156.8	161.1	174.9	175.8	172.7	46.3
Photo-engravers:										
Day work	43	1.337	1.346	(1)	(1)	(1)	(1)	(1)	(1)	44.1
Night work	37	1.577	1.596	(1)	(1)	(1)	(1)	(1)	(1)	41.5
Pressmen, web presses:										
Day work	121	1.074	1.089	199.4	208.2	212.2	223.3	224.9	228.1	46.8
Night work	106	1.255	1.257	193.2	200.6	198.5	209.7	215.7	216.1	42.7
Stereotypers:										
Day work	61	1.007	1.055	180.4	184.5	188.1	191.0	191.0	200.1	46.7
Night work	56	1.142	1.201	182.8	188.4	187.9	188.4	188.6	198.3	43.1
Average, newspaper	908	1.220	1.241							45.0
Grand average	4.536	[4]1.195	[4]1.204	228.1	237.9	250.3	259.5	260.6	262.1	44.8

[1] No data for 1913. [3] Per 1,000 ems. [4] Not including pieceworkers.

Table 5 shows the per cent of increase in weekly wage rates in 1929 as compared with specified years, beginning with 1907, the earliest year for which data are available. For lack of space the years 1908 to 1912, inclusive, 1914 to 1916, inclusive, 1918, 1920, 1922, and 1924 are omitted. The figures are not index numbers, but may be converted into index numbers. The first line of the table shows that the weekly rate of bakers in 1929 was 206 per cent higher than in 1907, or more than three times as much in 1929 as in 1907. Read as index numbers and taking 1907 as 100, the index number for 1929 is 306. If 1913 is taken as the base (100), then 1929 index number is 260.4.

In all the 34 trade classifications for which data reach back that far weekly rates more than doubled between 1907 and 1929 and two more than trebled.

Comparing 1929 wages per full-time week with those of 1928 the changes noted in individual trades are as follows: Bakers' wage rates show an increase of 2.3 per cent. In the building trades 21 occupations show increases, while 18 show decreases. The increases ranged from less than one-tenth of 1 per cent for slate and tile roofers to 23.8 per cent for ship carpenters. Over half of the increases amounted to 2 per cent or less. Those of marble setters increased 7.1 per cent, those of marble setters' helpers 6 per cent, and those of plumbers' laborers 8.1 per cent. Decreases in rates in the building trades ranged from one-tenth of 1 per cent for elevator constructors to 7.9 per cent for bricklayers—sewer, tunnel, and caisson. The rates of millwrights decreased 4.7 per cent, those of composition roofers 2.1 per cent, and those of plasterers 2 per cent; the remainder of the decreases were less than 2 per cent. Chauffeurs' wage rates decreased 1 per cent, while those of teamsters and drivers increased two-tenths of 1 per cent. Wages in the granite and stone trades increased—those of granite cutters 1.5 per cent and those of stonecutters 4.5 per cent. Laundry workers' wages increased 2.5 per cent, those of linemen 2.4 per cent, and those of longshoremen seven-tenths of 1 per cent. In book and job printing all occupations show an increase in wages, ranging from eight-tenths of 1 per cent for bindery women to 5.2 per cent for machinist-operators. The wage rates of electrotypers increased 2.1 per cent. In the remaining cases the increases were less than 2 per cent. In newspaper printing all occupations gained increases in wages except machinist-operators on day work, whose average rate showed a decrease of three-tenths of 1 per cent. The increases ranged from four-tenths of 1 per cent for machinist-operators on night work to 4.6 per cent for stereotypers on night work.

TABLE 5.—PER CENT OF INCREASE IN RATES OF WAGES PER FULL-TIME WEEK IN 1929 AS COMPARED WITH SPECIFIED PRECEDING YEARS

Occupation	Per cent of increase in rates per full-time week in 1929 as compared with—									
	1907	1913	1917	1919	1921	1923	1925	1926	1927	1928
Bakery trades										
Bakers	206.0	160.4	128.0	51.1	4.7	5.4	[1] 0.5	4.0	0.9	2.3
Building trades										
Asbestos workers	[2]	[2]	131.7	72.8	31.5	35.8	17.0	9.5	4.3	3.7
Bricklayers	136.7	128.6	114.9	80.3	34.0	21.1	8.6	2.3	.4	[3] .5
Sewer, tunnel, and caisson	[2]	96.9	90.4	73.8	28.5	23.4	5.3	[1] 1.1	[1] 8.9	[1] 7.9
Building laborers	154.7	138.1	113.4	63.9	13.5	18.5	11.8	1.3	.8	.5
Carpenters	169.9	147.6	115.9	72.5	27.2	22.7	12.4	5.1	1.6	1.8
Millwrights	[2]	[2]	80.1	38.9	8.2	4.0	3.2	[3] .5	[1] 12.4	[1] 4.7
Parquetry-floor layers	[2]	126.9	94.8	60.4	9.7	9.0	12.5	[1] 4.9	[1] 3.5	2.8
Wharf and bridge	[2]	[2]	124.6	91.4	31.1	29.8	9.9	2.8	[1] 2.0	[3] .9
Cement finishers	140.3	122.9	109.8	71.5	23.1	21.5	9.4	2.6	[1] 1.5	.1
Composition roofers	[2]	[2]	148.2	97.7	33.8	30.6	15.7	6.5	3.6	1.3
Helpers	[2]	[2]	90.9	57.9	12.5	13.1	3.5	[1] 15.6	4.9	[1] 2.1
Elevator constructors	[2]	[2]	114.4	74.3	28.5	29.4	10.2	4.5	.8	[3] .1
Helpers	[2]	[2]	140.0	86.9	28.4	28.6	11.6	3.6	.4	[1] 1.3
Engineers, portable and hoisting	[2]	123.6	110.8	72.5	31.0	27.1	14.1	7.8	2.3	[3] .2
Glaziers	[2]	[2]	[2]	93.5	36.6	29.0	10.3	8.3	1.3	.5
Hod carriers	181.6	173.5	134.3	72.1	15.9	27.6	9.7	.6	[1] 1.8	[1] 1.9
Inside wiremen	180.4	151.6	125.0	77.9	28.5	31.7	11.8	6.2	2.0	1.5
Fixture hangers	[2]	129.6	100.9	65.7	18.2	16.4	8.1	1.9	3.2	2.0
Lathers	[2]	138.8	119.6	83.7	27.2	22.1	4.0	1.9	[1] 1.6	[1] 1.4
Marble setters	153.1	131.4	126.5	94.7	45.2	31.1	22.9	9.9	7.6	7.1
Helpers	[2]	162.4	145.7	105.8	22.0	21.4	18.1	6.4	7.2	6.0
Mosaic and terrazzo workers	[2]	[2]	144.8	118.3	43.9	44.6	16.4	14.1	9.8	4.9
Painters:										
Building	184.7	148.2	114.2	66.7	22.6	18.8	6.5	1.2	[1] 1.7	[3] .4
Fresco	[2]	117.3	87.4	54.3	13.8	13.4	6.2	3.2	[1] 6.1	2.1
Sign	[2]	133.1	120.0	67.8	20.5	14.9	1.9	[3]	[3] .7	[3] .7
Plasterers	130.6	121.7	109.7	72.8	25.8	16.8	2.9	[1] 1.0	[1] 2.6	[1] 2.0
Laborers	174.5	151.6	126.5	72.8	16.6	20.4	5.1	3.3	2.4	.4
Plumbers and gas fitters	150.5	126.8	115.0	73.5	27.7	24.6	11.9	3.8	1.8	[3] .3
Laborers	[2]	[2]	[2]	66.9	22.3	17.2	8.2	7.7	6.9	8.1
Sheet metal workers	185.2	148.9	125.1	76.3	26.2	26.4	11.4	4.3	1.5	3.7
Ship carpenters	[2]	[2]	80.9	34.4	21.1	17.7	25.2	14.5	29.1	23.8
Slate and tile roofers	[2]	[2]	135.6	89.8	33.7	25.6	8.4	4.9	.2	[3]
Steam and sprinkler fitters	166.3	132.8	114.1	76.1	39.7	36.3	12.8	4.2	1.5	.1
Helpers	252.0	198.2	165.4	93.8	38.1	26.6	11.1	5.1	.4	[1] 1.6
Stonemasons	168.9	154.3	132.8	90.6	33.1	21.0	12.2	1.7	.6	[3] .4
Structural-iron workers	157.9	132.0	112.7	64.7	27.7	31.7	14.9	7.5	[3] .3	[3] .3
Finishers	[2]	139.5	120.8	75.0	30.6	36.9	21.7	8.3	4.6	4.0
Tile layers	[2]	119.0	106.5	84.5	37.9	28.2	10.3	4.3	.6	.9
Helpers	[2]	166.7	146.6	98.8	18.8	22.8	9.7	1.2	.1	[1] 1.8
Chauffeurs and teamsters and drivers										
Chauffeurs	[2]	99.1	82.4	36.8	14.2	14.8	3.5	3.5	[3] .6	[1] 1.0
Teamsters and drivers	[2]	147.5	120.3	57.0	24.1	22.7	11.0	7.8	3.1	.2
Granite and stone trades										
Granite cutters	169.7	148.4	127.9	62.1	19.4	17.6	14.8	2.2	2.7	1.5
Stone cutters	159.7	150.0	127.0	80.6	33.5	27.7	13.9	4.7	5.0	4.5
Miscellaneous trades										
Laundry workers	[2]	[2]	83.0	41.1	10.2	10.4	3.1	4.2	6.4	2.5
Linemen	[2]	[2]	[2]	[2]	8.9	12.7	8.3	3.6	3.5	2.4
Longshoremen	[2]	89.9	59.6	27.4	4.9	10.6	1.8	1.9	5.7	.7
Printing and publishing, book and job										
Bindery women	[2]	[2]	120.9	53.0	3.5	4.1	1.5	7.3	1.4	.8
Bookbinders	147.0	130.5	113.0	48.6	11.0	10.5	4.6	2.8	1.0	.9
Compositors	160.0	131.0	115.2	59.4	11.9	10.5	5.9	3.9	2.0	.5
Electrotypers	182.6	154.3	124.8	86.7	18.1	9.4	5.1	4.1	2.8	2.1
Machine operators	128.7	110.2	101.6	53.6	13.5	11.8	7.5	6.1	2.3	1.6

[1] Decrease.
[2] No data.
[3] Less than one-tenth of 1 per cent.

TABLE 5.—PER CENT OF INCREASE IN RATES OF WAGES PER FULL-TIME WEEK IN 1929 AS COMPARED WITH SPECIFIED PRECEDING YEARS—Continued

Occupation	Per cent of increase in rates per full-time week in 1929 as compared with—									
	1907	1913	1917	1919	1921	1923	1925	1926	1927	1928
Printing and publishing, book and job—Continued										
Machine tenders (machinists)	(2)	102.1	95.1	44.6	10.4	9.7	4.4	3.0	[1] 3.1	1.5
Machinist-operators	(2)	75.4	69.1	42.3	12.4	9.5	.7	3.3	[1] 2.2	5.2
Photo-engravers	(2)	(2)	116.8	76.0	29.9	27.6	16.1	9.3	4.3	1.5
Press assistants and feeders	197.2	166.2	141.6	60.7	15.9	8.3	3.6	2.7	1.4	.9
Pressmen:										
Cylinder	146.4	117.5	105.6	53.6	12.6	8.5	4.5	2.5	2.4	1.6
Platen	160.1	138.2	118.1	61.4	9.1	9.0	5.0	1.2	.2	1.7
Printing and publishing, newspaper										
Compositors:										
Day work	131.4	107.6	98.5	58.5	19.1	15.7	7.5	6.0	3.5	1.7
Night work	117.9	103.1	96.2	55.9	18.5	12.5	8.3	5.2	2.4	.8
Machine operators:										
Day work	133.5	113.4	103.4	60.5	22.6	16.2	8.9	7.3	3.8	1.6
Night work	120.4	106.6	98.1	56.7	21.6	15.4	9.3	6.1	5.3	.9
Machine tenders (machinists):										
Day work	(2)	100.3	95.6	45.4	12.5	10.3	7.9	8.1	3.1	1.3
Night work	(2)	95.2	91.5	44.7	14.3	12.2	9.2	10.7	5.0	2.5
Machinist-operators:										
Day work	(2)	73.9	67.5	55.5	7.9	6.1	3.3	2.0	[1] .7	[1] .3
Night work	(2)	79.9	74.9	51.9	12.6	14.4	9.8	6.9	.2	.4
Photo-engravers:										
Day work	(2)	(2)	109.3	69.5	27.3	23.5	14.4	11.0	6.4	.7
Night work	(2)	(2)	116.1	68.7	29.4	21.9	14.4	2.7	2.8	1.0
Pressmen, web presses:										
Day work	153.9	126.2	116.8	65.1	22.8	21.6	9.1	7.0	2.0	1.3
Night work	136.1	124.8	117.8	62.3	22.8	21.1	8.7	8.5	3.2	.6
Stereotypers:										
Day work	124.2	96.4	87.3	60.0	15.8	12.7	7.0	5.0	4.2	3.5
Night work	116.7	97.5	89.2	61.4	15.6	12.2	7.5	6.2	5.2	4.6

[1] Decrease.

[2] No data.

INDUSTRIAL AND LABOR CONDITIONS

New England Labor Congress

A LABOR congress somewhat unique in its character was held under the joint auspices of the Workers' Educational Bureau of New England and the six State federations of labor of New England, in Worcester, Mass., October 25–27 inclusive, and was attended by approximately 400 delegates.

The purpose of the gathering was very succinctly stated by the president of the New England section of the Workers' Education Bureau in calling the conference to order. He said, "The purposes for which this gathering is assembled are many. They range from the consideration of the concerns of local industries to the problem of New England's industrial future. The dominating purpose of our gathering is the desire of labor in New England to come together to study our common problem, and plan for the future."

Three days were spent in discussing the general industrial situation with special regard to New England. Evening sessions were given over to the committees composed of delegates from each of the six States. Out of these committee meetings there was evolved definite recommendations as to what it would be best to do to improve the New England situation. The principal committees were those on transportation, textiles, power, building trades, metal trades, boots and shoes and leather products, etc.

Each committee turned in a report at the close of the session. Some of these reports were very significant. The report of the textile group is reproduced below.

The representatives of the textile group of this New England congress, desirous of eliminating the abuses of the industry and planning to cooperate in a constructive future, can not help calling attention to the large part the textile industry played in New England States in years gone by.

Vast capital investments and thousands of skilled workers were instrumental in providing products to all the world.

We contrast this with present-day conditions and recent developments, whereby we see unemployment rampant, distress in all quarters, dislocation of markets by cut-throat competition, and the industry deemed the only way out to be by way of removal of plants to longer-hour sections, reduction in wages, and reduction in costs by liquidating labor. These obviously are not roads to success, but only create further depression within the industry.

We believe the fundamental reason for stagnation in the textile industry is night work and excessive hours in many States. Night work must be abolished in this industry in the various States in New England and the South, and working hours reduced to a uniform number, and, if unemployment is to be banished and continuity of employment with steady and normal production achieved, we hold that hours will have to be ultimately reduced to the five-day week, operating to reduce overproduction.

We wish to call attention to the public to keep in mind that the labor costs in the production of textiles compare favorably with that of any other commodity. Consumers of textile products purchase labor cheaper than in any other commodity.

As an illustration of the efficiency of the industry we would cite the statement of Mr. Robert Amory, spokesman for the National Association of Cotton Manu-

facturers, before the Ways and Means Committee of the United States Congress at Washington, D. C., in February, 1929, in a plea for special tariff legislation for the industry: "The industry produces 4½ miles of fine yarn woven into cloth for nine cents. This cost including everything except cotton."

The margin for economies in production cost is thus very slight, even though the suggested solution be specialization.

This industry's traditional low-wage policy has proven inadequate as a stabilizer to the industry. Since it is the considered view of merchandising specialists that the hazards of production and distribution, with the evils of seasonal work and unsold goods, could be greatly reduced by scientific studies of consumer's demand, it is recommended that organized labor sponsor or join in measures of research looking toward a census of distribution of textiles in the United States. Such research would be planned to start with the consumers and to work back through the various channels of distribution, with attention to the new developments in distribution through chain stores, and mail-order houses.

We urge that the Federal Bureau of Labor Statistics endeavor to compile more complete statistics of the various subdivisions of the industry, particularly number of employees displaced in each division by the introduction of labor-saving devices or by specialization methods.

We urge this congress to refer to the various State branches and central bodies to actively promote such measures as will eliminate night work in the textile industry and bring about uniformity of hours and conditions in keeping with the general sentiment of this congress. Looking toward larger measures of cooperation between management and workers, we offer the following example of accomplishment in dealing through responsible organizations of labor.

Now since the unfavorable attitudes of many employers towards unionization are due to a lack of vision as to the possibilities in union-management relations, it is suggested that the labor relations which now obtain in the union mills of Salem, be written up in a treatise addressed to managers and industrial technicians and presenting a scientific portrayal of the actual workings of union-management cooperation. Such a treatise would equip organizers and believers in organization with a concrete exhibit of high-grade human engineering in the textile industry. It would display a standard of personnel relationships as developed and practiced by scientifically minded managers and labor leaders, and would throw a burden of proof upon every nonunion employer to show reason why his own labor program should not be put upon an equally sound basis.

Employment and Adjustment of the Older Worker

IN A pamphlet entitled "The employment and adjustment of the older worker," the American Management Association has published a paper,[1] presented at its convention in Chicago on November 15, 1928, summarizing the experience of 64 companies which answered the association's questionnaire.

Only nine of these companies had definite written rules as to age at time of employment, the majority having "a tacit understanding that the employment office should not take on older men and women." The following typical answers on this point are quoted from the report:

New persons above 50 years of age are seldom employed by this company (0.2 per cent of total number hired); persons between 41 and 50 are hired only after careful interviewing as to experience and physical fitness (1.8 per cent of total number hired). A tacit understanding in the employment office has existed for the last five years or more; is based on the assumption that after 50 there is in many individuals an increasing liability to accident and decreasing efficiency.

Our employment department has a tacitly accepted age limit for employment, of 45 years for men and 35 years for women. This has been effective for nearly 10 years. No written rule and subject to exceptions any time common sense dictates.

[1] General management series No. 86: The employment and adjustment of the older worker, by C. R. Dooley and Helen L. Washburn. New York, 1929.

Policy is not to employ any one under 17 years or over 45 years of age. No written rule, but in effect two years. Minimum established to relieve necessity of sending employees to continuation school, and maximum to comply with rules of pension fund.

Yes (as to age limit)—40 years, based on following reasons: (*a*) The provision for normal retirement under the company's pension system at the age of 65 years; (*b*) the mortality rate of older people is higher than that of young people; (*c*) the recruitment of younger personnel offers a positive advantage because of the greater adjustability of young people.

The report states that where there is an age limit it really "works out much lower than these established limits—due chiefly to the policy of employing young people and training them up in the business. * * * There were twelve times as many answers admitting that in practice the hiring age is much below the established age limit, as those taking the opposite view—rather conclusive proof of a real situation." One company stated that the employing age was "slightly under 30 years," and another that "actually very few people are employed who are over 35 years of age."

The setting of an age limit is often brought about by other factors than an arbitrary ruling by the company. One of these is the policy of promotion from within, thus making positions at the bottom of the ladder and those requiring special kinds of experience practically the only openings available to persons not already employed by the company. Pension plans also operate to fix an age limit on employment, since "these plans usually require a certain length of service before pension—usually from 15 to 25 years, although a very few companies only require 10 years. As the retirement age is generally set at from 55 to 65 years, a new employee must be under 40 or 45 years in order that the company may obtain the requisite number of years of service before pensioning." However, of the companies covered by the survey, nearly twice as many did not have pension plans as had them.

The opinion of the authors of the present report is that "there seems no good reason why an arbitrary maximum age at the time of employment should be adopted. Men and women in good health should be given fair and full consideration for openings regardless of age." It is agreed that the elimination of the factors which automatically bring about age limits "is not quite so simple," but it is believed that if employers make a conscientious effort something can be done toward eliminating them. "For instance, it is plainly possible to lessen the effect of pension plans upon the employment age by grading pensions according to years of service under 20 years or by employing middle-aged people with the clear understanding that they will not be eligible to pensions upon retirement owing to insufficient length of service." Replies from some companies showed that they hire middle-aged workers with this understanding. The policy of "promotion from within," however, is said to be recognized as a just one by applicants for positions as well as by the workers already employed, and the report states that "it seems agreed beyond further question that the policy of promotion from within can not be changed or modified. It is only clear justice to have such a policy; it builds a strong, efficient and lasting organization; it lowers turnover; its disregard would have a most disastrous effect on the morale of a company; and it is the only outlet or reward for the increasingly large number of people who have

become part of the great organizations and combinations which are taking the place of individual efforts."

Reorganizations and mergers of companies often result in the release of older workers, "who are frequently slower, not so easily transferable, and higher salaried than younger ones."

Lack of adaptability and personal peculiarities are mentioned as drawbacks in the placing of older workers, although opinion on this point was not unanimous.

In answer to the questions as to whether they had had occasion to discharge employees of middle age and long service, and, if so, how frequently and under what conditions, more than half of the companies reported that they had seldom found it necessary "and then only for extreme reasons. Those who have had occasion almost all modified their statements by explaining that such terminations usually had specific causes."

According to the study, the problem "which is probably most frequently encountered is that of the older employee who has grown ineffective in his work and who sometimes is beginning to be physically disabled, when he has a good record and long service." However, all but two of the companies approached had a definite policy "about retaining older employees when they have lost their full usefulness but have not reached the pension age." Half of the companies stated that they had found it practicable to transfer older employees to positions of less responsibility at reduced pay; about one-fourth had continued these employees at the same pay on positions of less responsibility, and only half a dozen had not found it practicable to make similar arrangements.

There were only three companies which did not make some provision for employees who could not be transferred to other work and whose services had to be terminated; three pay them from pension, unemployment, benefit, or service funds; 10 stated that they nearly always are able to effect transfers and are not obliged to dismiss them; and more than half make special payments if dismissal becomes absolutely necessary.

None of the companies covered in the study gave training especially for the older worker, although the majority gave general training, both by courses and on work, to all types of employees to increase their efficiency and versatility. It was felt that, since older workers benefitted by this general training along with the others, there was little need for special instruction for them. "It is undoubtedly true that as time goes on the great majority of employees in large organizations will be so well trained that not only will their efficiency on their special line of work be brought to a high level, but they will be well acquainted with various phases of their company's business—thus increasing their adaptability and 'transferability,' and ending one of the chief difficulties connected with older people."

The authors make a number of suggestions to workers for improving their usefulness, which are quoted in part below:

> One thing that is absolutely necessary is that an employee make every effort to keep his work up to a high standard. In fact, he should try to become recognized as above the average. This is a day of keen competition and no man (and no company) can afford to slacken.
>
> The man who has made himself an expert in some line evidently has a decided advantage over the man of general experience. In the first place if his work is

of particular value, his own company is apt to keep him. If it does become necessary for him to find a new place, age limits may have to be waived in his favor if he is considered very good in his line. * * * More than half of our correspondents said they can do more for applicants of special experience.

* * * It is evident that while it is a good thing for a man to be especially qualified for certain work, there is some danger that he may be hampered at times by knowing only one line. It will be especially helpful toward transfer in his own company if he knows several phases of its business. For this reason he should avail himself of every bit of training he can get and of every variety in work which may be offered him. The more he can learn relative to his company's business, the better. If outside study or reading will help him, he must not fail to add to his equipment by this means.

Since it is pretty well agreed that the difficulties of older people are due in no small degree to their being "set" in their habits of work and of thought, not sufficiently adaptable nor teachable, not cooperative with associates, and above all not open-minded enough to new ideas and customs, it surely behooves them to watch out for these middle-aged tendencies.

It is quite commonly recognized that a person's physical age and his mental age may be very different. It may not be possible for him to actually control the former, although care and good habits can do much to prolong full vigor, but he himself is largely responsible for his mental age. He should try continuously to keep alert and interested, and to keep a contact with the viewpoint and ways of younger people—whether or not he approves or follows all of them. It has been well said that "it is a bad thing to be out of step with your times."

If an employee finds he must be transferred, it is often better for him to accept the transfer and to stay with his company even if it involves a lower position and less pay. This often proves only a temporary situation, and a little later he finds himself advancing in his new place—especially if he takes trouble to learn his new work.

Although most of the concern over the problems connected with the employment and transfer of older people is directed toward the workers themselves, the report states that "there is a strong feeling abroad that business and industry are losing something when able mature people are barred from their employ either because of an arbitrary rule or because of certain conditions." One of the authors amplified this statement in a recent address [2] in which he pointed out that the older worker has had experience; that he usually has better judgment than a young man; that he is steady; that he has a greater sense of responsibility toward his company and his work; that his health is often better than that of a young man; that he usually has good self control, is more tolerant, more patient, and more understanding; and that he has a better perspective on life and his place in it and thinks of the group rather than of himself.

[2] American Management Association. The Management Review, November, 1929: The older worker's place in industry, by C. R. Dooley. Address at conference under auspices of Y. M. C. A., Silver Bay, N. Y., August 30, 1929.

WOMEN IN INDUSTRY

Part-Time Jobs for Women

TOWARD the close of the war there was considerable discussion of the industrial potentialities of the partly occupied woman, the married woman especially, whose home duties do not occupy her full time but do prevent her from conforming to the usual industrial time-table. Plans were suggested for part-time schedules under which such workers could be utilized, but with the close of the war the industrial specialists dropped the subject, as no longer of urgent interest. The potential workers themselves, however, took a different view of the matter, and quietly but steadily the number of part-time workers has been increasing, and the facilities for securing part-time jobs have been extended, until the subject has again come into notice. The Bureau of Women in Industry of New York has recently published a study of the opportunities for part-time work for women in New York City, and the May, 1929, volume of the Annals of the American Academy of Political and Social Science, devoted to "Women in the Modern World," presents a discussion of the married woman and the part-time job by Dr. Lorine Pruette.

Part-Time Workers

THE part-time job is especially suited to the married woman, according to Doctor Pruette. In many cases the home activities are not sufficient to occupy her satisfactorily. Where there are children, it is often a question whether they are not better off if the mother is away for part of the day; modern psychologists have much to say about the danger to a child of a too close and continuous devotion on the mother's part. The effect upon the woman herself of outside work is often good, and there is also the economic side. Poor health, loss of employment, or low earning capacity on the husband's part may make it desirable for the wife to become an earner, and even when these reasons do not exist, the future needs consideration:

> Not only does part-time employment of the married woman offer the opportunity for the development of a new home life, it lessens or destroys the appalling economic risk taken by every woman who to-day marries and devotes herself to the traditional rôle of wife. There is no security in domesticity. It is heart-breaking to see the middle-aged woman, trained for nothing except the duties of the home, venture out into the industrial world. Divorce, death, or loss of money may put her in this position, where she has so little to offer organized industry and so much to suffer.

But the appeal of part-time work is not only to the married woman. There are single women with household duties which do not fill their time, students working their way, women whose health does not permit full employment, and those who already have one part-time job and want another to supplement it. During the year

1928 the New York Bureau of Part-time Work registered 2,330 applicants for jobs, and from its figures as to reasons for these applications the following statement was drawn up:

Reason	Number	Per cent
Household, married	783	33. 6
Household, single	172	7. 4
Leisure	202	8. 7
Health	102	4. 4
Study, arts and other	719	30. 9
Other part-time job	165	7. 0
Part-time profession	187	8. 0
Total	2, 330	100. 0

It will be seen that while the largest single group is made up of married women, the next largest consists of students whose matrimonial status is not given. Nearly one-sixth had already some job or profession which filled part of their time.

Extent and Kind of Demand for Part-Time Workers

ANY industry, says Doctor Pruette, which is liable to have peaks of activity at a given time of the day or week is adapted to part-time employment; thus department stores, restaurants, beauty parlors, and the like are large employers of part-time workers. Sometimes, however, other considerations come into play, as in the case of transportation lines, which "also having definite peaks of activity, would offer the same opportunities, but certain legal provisions and an attitude against employing women lessen the opportunity here."

It seems, however, reasonable to suppose that all occupations which have definite peaks of business will find it desirable to employ large numbers for shorter hours and only a small force for the complete period, applying to the day the system already in use for seasonal occupations.

The New York Bureau of Women in Industry lists 28 types of work in which part-time placements are made, the great bulk of such placements being in 16 kinds of occupation—care of children, social secretarial work, stenography, typewriting, bookkeeping, selling, cashiering, housekeeping, waiting on table, personal maid service, domestic work, housecleaning, hand laundering, infant nursing, professional nursing, and beauty parlor work. In addition, there are such jobs as helping in a doctor's office or clinic, laboratory work, medical research, translating, tutoring, guiding the blind, plain sewing, and addressing envelopes. Information obtained by the bureau from 118 firms employing part-time woman workers showed that stores offer the largest opportunity for such employment, with restaurants coming next; office buildings and theaters also employ a considerable number, the office buildings as cleaners, and the theaters as ushers, cleaners, matrons, cashiers, ticket sellers, and occasionally wardrobe women and nurses.

The hours and earnings differ so widely with the kind of work done that no summary can be made. Naturally the part-time work pays less than the whole-time job, and for this reason is particularly apt to be taken by the married women, who in some cases are so much in the majority that work hours are arranged with special reference to their needs.

In stores and restaurants married women are predominant among the part-time employees. One store manager, recognizing that married women need some days each week for their housekeeping, employs two groups of contingent saleswomen, one group working Monday, Wednesday, and Friday, the other, the remaining three days of the week. Married women make the most satisfactory part-time workers because in most cases unmarried women can not live on part-time wages and usually take such positions only temporarily under pressure of unemployment.

The Bureau of Women in Industry gives, for the 16 kinds of work in which part-time placements are most frequently made, the following rates of pay as prevailing in New York City:

Care of children, 50 to 60 cents an hour and car fare.
Secretarial work (social), $1.50 an hour ($2 with stenography); $20 a week of 24 hours.
Stenography, $15 a week of 24 hours.
Typing, $2.50 to $3.50 for 1,000 addresses; $12 to $13.50 a week of 24 hours.
Bookkeeping, $15 a week of 24 hours.
Selling, from $3 and $4 a day to $16 a week, according to the type of store and the hours required.
Cashiering, $8 to $12 a week of 24 hours.
Housekeeping, $10 a week of 24 hours; $85 to $125 a month for mornings only.
Waiting on table, 75 cents an hour.
Personal maid service, $2 a half day and car fare; $2.50 a half day with packing, and car fare.
Domestic work, $10 a week and car fare, hours 8 a. m. to 12 m., 6 days a week; $10 to $12 a week and car fare, hours 2 p. m. to 8 p. m., 6 days a week.
Housecleaning, 50 cents an hour.
Laundering (hand), 50 cents an hour.
Infant nursing, temporary, $5 a day of 24 hours.
Professional nursing, $1.50 to $3 an hour for bedside treatments.
Beauty parlor work, $2.50 to $15 a day, $5 usual rate.

Waitresses in restaurants are also very largely part-time workers, the hours varying from 16 to 28 a week, and the pay from $3 to $8 weekly, exclusive of tips and of meals, all part-time workers having one and sometimes three meals a day. Kitchen workers in restaurants, who also are often part-time workers, have the same hours as waitresses, but are paid from $10 to $12 a week, the higher rate being due to the fact that they receive no tips. Women working as office cleaners usually are employed about 30 hours a week, and receive from $10 to $13.

Agencies for Securing Part-Time Work

Most employment agencies will, when convenient, bring together the part-time worker and the part-time job, but since they generally treat this as entirely a side issue, several organizations have been formed for the express purpose of attending to this line, and others have assigned a special department to such work. The New York Bureau of Part-Time Work was organized in January, 1922, to secure permanent positions for trained women who desired to work part time, and in November of the same year a similar bureau was organized in Philadelphia. The two bureaus have now a record of more than 13,000 part-time jobs filled. In 1928 the New York bureau had more than 2,000 new registrations of women hoping to secure such work, and in Philadelphia there were 665 new registrations. Employers seemed to appreciate the bureaus as much as did the employees.

During the year, 1928 employers' calls in the New York office indicated the availability of 2,400 jobs, 1,741 of which were temporary and 659 permanent. The women who got their chance through the bureau were 1,608. The jobs that they filled during the year totaled 2,169, the major proportion being temporary.

In addition to this bureau, the report of the New York Bureau of Women in Industry lists the New York State Employment Bureau, the joint bureau for the handicapped, and the vocational bureaus of the Young Women's Hebrew Association, the Exchange for Women's Work, the Home Bureau, the Academy of Medicine, the Hecksher Foundation for Children, the Lighthouse for the Blind, New York University, Columbia University, Teachers' College, Barnard College, and Hunter College as doing such work.

Objections to Part-Time Work

TWO OBJECTIONS are brought against part-time work, both based in the main on the married woman's employment in such jobs. First, it is said that a married woman's place is in her home, that if she takes outside work she must inevitably neglect either the home or the business, and that having elected matrimony, it is obligatory upon her to fulfill the duties of that estate, leaving the pursuit of economic independence to her unmarried sisters. The proponents of part-time work reply that this argument would apply far more forcibly to full-time work, but that there is no proof that the intelligent woman who takes outside work neglects her home as a consequence. Her pursuit of economic independence is a matter for her and her husband to settle between themselves, and her management of her household is emphatically her affair. Until there is evidence that part-time work leads generally or even often to neglect of the family, society has no occasion to interfere. The second argument is that since a married woman is seldom completely dependent on her earnings she can afford to work for less than a single woman, and therefore takes the part-time jobs at a part-time pay on which a single woman can not subsist, thus interfering with the chances of the wholly self-supporting woman. A good many of those who bring forward this argument object to the presence of married women in industry in any capacity, on the ground that they are taking jobs which ought to go to the unmarried, and a few object to part-time work per se, assuming that if no woman would take partial employment, more would receive full-time employment. Replying to this, advocates of part-time work point out that there are a number of jobs which do not require full time, and that no employer is going to pay full-time wages for these, no matter who the worker is or how great her need. A young author, for instance, who might be glad to employ a stenographer for two hours a day will probably, if he finds he would have to pay her for eight hours, do the work himself. A moderately well-to-do woman who could afford to engage a mother's helper for a part of the day will go without her if she has to pay a wage sufficient for a single woman to live on; and so on. As for the abolition of part-time work making more full-time work, they point out that many businesses are so arranged that this could not be done. A restaurant keeper who needs 16 waitresses for the rush hour and 4 throughout the day can not meet the situation by employing 8 for the full day. In fact, they say,

there are an increasing number of jobs which require only part of a worker's time, and for which it would be out of the question to pay full-time wages. Married women, students, and others who do not need to secure full living wages are peculiarly fitted for such work, and the effort to bring such opportunities and such workers together is one which should be encouraged in the interests of employer and employee alike.

Woman Workers in Switzerland

TWO recent Swiss publications give valuable information on the situation of woman workers in that country.

Women in Swiss Industry

THE first of these publications, by a woman well known as an economist, deals with the general subject of women in industry in Switzerland.[1] Below is given a review by Dr. Dora Schmidt of the Eidgenössisches Volkswirtschaftsdepartment Arbeitsamt, at Bern:[2]

Swiss factories employ about 130,000 women. The Swiss Exposition for Women's Work (*Schweizerische, Austellung für Frauenarbeit*), "SAFFA," in 1928 was successful in calling increased attention to the work of these women. For a fuller and better understanding of the exposition there has appeared the comprehensive investigation of the working conditions of this group of women in industry. The editor and compiler, Dr. Gagg, who had already made a name for herself through her study on the "Facts and Results of the Protection of Women in Industry" (*Wesen und Aufgaben des Arbeiterinnenschutzes*, Bern, 1925), has taken up the cudgels against any attempts to depreciate the work of the factory women. She shows that the entrance of women into industry has been an indispensable condition precedent to the present state and development of the Swiss exporting industry. Many errors are widely current not only respecting the significance but also concerning the peculiar nature of the work of women. Woman is considered adaptable for machine work, such as can be learned by anyone without training. Yet in machine work both the amount and the quality of the output depend in great part upon the skill and ability of the workers to think.

The danger of the exclusion of the men through the work of women is not apparent. Among the points emphasized in the book, and that correctly, is the fact that the number of women in Swiss factories has begun to show a decrease, if one takes into account the relative proportion which they form of the total. For instance, in the period 1888 to 1923, their relative proportion in industry declined from 46 to 38 per cent of the total employed.

For the men, factory work may be a life occupation. The unmarried woman on the contrary looks upon it in relation to her future marriage as something temporary, and loses therefore the real value of her occupational training. Dr. Gagg is of the opinion that a specialized form of vocational training would be proper. For the 6 to 10 years which the working woman spends in the factory before her marriage she is well paid. The author recommends therefore the most careful selection of persons with reference to the adaptability to different occupations or activities. Likewise in industry this task should not be neglected.

What raises the book above other good works is its genuine sympathy and nearness to life. Almost every aspect of the study shows that the author has not made her decision on the basis of preconceived theory but from actual observation of the facts. She knows how to be fair to the employer as well as to the worker. The book has had the extraordinary good fortune of being well received not only by the conservative Swiss press but also by the workers' press. No doubt it will shortly be listed as one of the standard works of Swiss industrial literature.

[1] Gagg, (Dr.) Margarita: Die Frau in der Sweizerischen Industrie. Zurich, Leipzig, Verlag Orell Fussli, 1928.

[2] Translated by Liefur Magnusson of the Washington branch of the International Labor Office.

Economic Advance of Women

THE second report,[3] by the secretary of the Sweizerische Zentralstelle für Frauenberufe, deals with the economic advance of women in Switzerland.

An analysis of Swiss census figures shows that the proportion of employed women has remained practically constant since 1870 in relation both to total population and to all women, and that the increase in gainfully occupied women has not kept pace with the population growth. The important change that has taken place, however, has been primarily in distribution, in the admission of women to new trades and the opening of opportunities in the professions, and in the gradual improvement in the attitude toward women.

The author summarizes the situation as follows: "Sixty years ago about 90 in every 100 gainfully occupied women were employed in agriculture, trade, and industry, and only 9 in commerce, communication, public administration, nursing, and art; 1920 brought the respective numbers to 67 and 30." "The relative decrease in women in agriculture and industry corresponds to a relative decline in women who are laborers and helpers, and on the other hand a greater increase in the officials and technical employees who are women." The census of 1860 found women engaged in only 168 of 787 different occupations, and in 1920 they were in 211 out of 249.

In discussing the improved situation of women, the author says that the opportunities of advance for women naturally are greatest in the professions traditionally occupied by them, as in hotel and restaurant work or in dressmaking, and she adds: "Industry offers the least prospect of a professional career," and "an able weaver or a good watchmaker remains just where she is her life long." "In the whole of Switzerland in 1920 were counted in industry and trade not more than 9 woman directors, 5 technical managing officials and 1,500 subordinate technical employees as against 162,000 laborers. Of the 9 woman directors and 5 technical managing officials, only 3 were in metal and machine industries and only 1 in the clothing trades, (other than dressmaking). Two women were appointed to the expert commission for the revision of factory laws in 1906, but the need for woman factory inspectors is still apparent.

From 1892 to 1908 many Cantons enacted laws regulating the smaller industries, especially prohibiting night work, which was forbidden in the large industries by Federal action in 1924. The author states that "The advantages that * * * factory laws bring to women are greater in proportion than the disadvantages. The health and strength gained for women very much outweighs the loss of employment." Unemployment aid applies to women as to men, but compulsory insurance for childbirth has as yet made little headway, and "The legally guaranteed time before childbirth often can not be observed because of material need, and the woman must early return to work in order to meet the increased cost of living."

The last section of the book deals with the handicaps women have had to overcome—physical, psychological, legal, and traditional—and with their economic difficulties. The appendix lists the Swiss professional and educational organizations of women, and schools training for trades and professions.

[3] Jaussi (Dr.) Nelli: Der wirtschaftliche Aufsteig der Frau. Zurich, Leipzig, Verlag Orell Fussli, 1928. (Reviewed by Mary Elizabeth Pidgeon, of the Women's Bureau, U. S. Department of Labor.)

HEALTH AND INDUSTRIAL HYGIENE

Health of Workers in the Granite Industry

THE effects of different types of dust upon the health of workers are being studied by the United States Public Health Service, which has recently issued the second of a series of bulletins [1] on this subject. These studies include not only the study of the occupational mortality statistics of the particular industry and the physical examination of groups of employees, but also observation of groups of workers for an extended period in order to ascertain the character and severity of the sickness they experienced and the relationship of such illness to the occupational environment.

A fixed method determined upon for all of the dust studies, in order to permit as detailed comparison between them as possible, included examinations to determine the general physical condition of the workers and special examinations, including X rays, to determine the extent of specific diseases of the respiratory system or abnormal lung conditions. Records were kept of the disabling illnesses and deaths and an analysis was made of the occupational environment. Autopsies were performed whenever it was possible to obtain the family's consent. The study of working conditions included the collection of dust samples and a general chemical analysis and a petrographic analysis of the dust.

The present study was not primarily one of the granite industry as a whole or of working conditions in particular plants but rather a study of the effect of silica dust of a definitely known composition upon the health of workers.

The study covered 14 plants located in 17 one-story buildings, the cubic capacity of which would have beeen adequate for a nondusty trade. Natural ventilation by means of windows, which were usually kept closed in winter, was relied upon, however, for the removal of dust, except in the case of sand blasters and inside surface cutters where there was exhaust ventilation. Only 28 per cent of the inside surfacing machines had individual fans, the remainder having a single fan for several exhausts. The ventilating systems were, in general, not designed to meet the particular problem and in some cases were not properly installed. Sickness records were obtained for 972 persons and the analysis of occupations showed that 68 per cent were in occupations in which pneumatic tools were used. The chemical and petrographic analyses of two samples of granite dust showed that there was 31.8 per cent free silica present as quartz in one sample and 38.6 per cent in the second. The analysis for steel fragments worn away from the tools showed about 0.1 per cent

[1] A digest of the first bulletin, on calcium dust (Portland cement industry), was given in October, 1928, Review, pp. 56-59.

present. The extent of dust present in the atmosphere of the plants was shown by a total of 220 dust determinations. The microscopic count of particles showed that the average for the various occupational groups varied from 59,200,000 particles per cubic foot for all hand pneumatic-tool operators to 1,900,000 for office employees. Within these limits the average for other occupations was approximately 44,000,000 for inside and outside surface cutters, 37,000,000 for carvers and letterers, and 27,000,000 for tool grinders. Polishers, sandblast operators, sawyers, and blacksmiths were exposed to average counts of 3,000,000 to 9,000,000. The maximum counts showed between 100,000,000 and 200,000,000 particles and the general plant atmosphere gave an average dust count of 20,000,000 particles per cubic foot, the occupations in which there was exposure to this atmosphere including foremen, tool boys, lumpers, boxers, cranemen, bed setters, carpenters, and mechanics.

A classification of the occupational groups according to the dust exposure showed that there were in class A, 614 hand pneumatic-tool cutters exposed to an average of approximately 60,000,000 particles; in class B, 104 persons exposed to more than average plant dustiness, averaging between 27,000,000 and 44,000,000 particles; in class C, 146 persons exposed to an average amount of plant dust, or 20,000,000 particles; and in class D, a group of 108 persons exposed to less than the average dust, or 3,000,000 to 9,000,000 particles. Practically no difference was found between summer and winter conditions in the plants, as in summer the dust removed by the ventilation systems was blown back through the open windows.

A comparison of the dust counts with those of other dusty trades studied by the Public Health Service showed that, with the exception of hard and soft coal, the highest average count was in granite cutting, and that the granite industry held first place in regard to danger to health, owing to the higher percentage of free silica in the dust.

Factors in Sickness Rates and General Sickness Record

THE BASIS for the calculation of sickness rates was a year of observation, that is, the record for a single individual for a year, or for a number of persons for part of a year, the sum of whose periods of observation as to sickness equaled one year. The number of persons for whom morbidity records were obtained was 972, totaling 1,346 years of observation. Five hundred and three granite workers were given physical examinations, and in addition 24 persons who had formerly been employed as granite cutters and 12 members of the families of cutters were examined. As a group they were found to have good physiques and should not have been particularly susceptible to tuberculosis.

Granite workers remain in the industry longer on the average than do workers in other industries. Approximately 50 per cent of those included in this study had worked 20 years or over. Fifty-five per cent of the total number in the group of hand pneumatic-tool operators, which was much the largest group and also the one subjected to the greatest exposure, had had more than 20 years' service.

Morbidity records for the study were kept for two and one-fourth years, covering practically the same period in all the plants. The records showed that 68 per cent of the cases of illness lasted 8 days or longer, as compared with a percentage of 35 to 40 among industrial workers generally. The sickness rate per thousand years of observation for these cases was 176.1, the outstanding feature of this rate being the high rate from tuberculosis. The respiratory rate was found to be higher among granite workers than among four other industrial groups—hard-rock gold miners, cement workers, iron and steel workers, and general sick benefit experience—although the rate for nonrespiratory illnesses among the entire group of granite workers did not show anything significant.

The various dust studies made by the Public Health Service show a difference in the types of respiratory disease occurring among workers exposed to different kinds of dust. Thus, hard coal and cement workers have an excess of cases of grippe and certain other minor respiratory affections; bronchial diseases and pneumonia are in excess among soft-coal workers; grippe and nasal fossae conditions lead among cotton workers; and tuberculosis among granite workers. There is also an excessive number of cases of pleurisy among granite and hard-coal workers, while silver polishers show no excess from any cause.

Among the granite workers the incidence rate for the dust-count groups A and B for all 8-day and longer cases was 215 per thousand years of observation; 105 for group C; and 61 for group D. In addition to the high rate from tuberculosis and suspected tuberculosis among the first two groups, the rate is also higher for other respiratory diseases, principally influenza and colds, and there is also an excess of nonrespiratory diseases, although these are not in such marked contrast. This suggests, the report points out, that the dust hazard is reflected in the general sickness rates among those workers exposed to excessive amounts of dust as well as in the prevalence of tuberculosis.

Analysis of the rates by age or length of service shows that the sickness incidence decreases with increasing length of service or age in groups C and D, but there is a rapid increase among the two groups having the greater dust exposure. The rate for respiratory sickness of short duration, chiefly colds and influenza, was also greater among persons diagnosed as having silicosis.

In general those occupational groups with the highest exposure to dust showed the highest percentage of workers with both respiratory and nonrespiratory illnesses, and this rate tended to increase with length of service. Of the 93 deaths recorded during the period, 73, or 78 per cent, were due to tuberculosis.

Cases of Silicosis and Tuberculosis

THE DEVELOPMENT of silicosis as shown by the physical and X-ray examinations appeared in group A, in which there was the heaviest dust exposure, after approximately two years of service, and at the expiration of four years all in the group had developed at least an early case of silicosis, while in five to nine years all but about 10 per cent had well-developed cases.

Two types of tuberculosis were found. The first, comprising the great majority of the cases, occurred in workers who already had a well-developed silicosis. The tuberculosis lesions were located generally in the base of the lung, and there were no periods of quiescence nor any recoveries. The onset of the disease was sudden and it ran a rapid course. The average age of these workers was 49 and they had been exposed to the dust for an average of 28 years. The other type, which has been termed "concurrent silicosis and tuberculosis," resembled ordinary cases of tuberculosis in the location of the lesions and the course of the disease. The persons in this group were younger, the ages ranging from 24 to 38 years, and the average exposure to the dust was 8 years.

Comparison of the different groups showed a significant association between the high tuberculosis prevalence and the dust hazard, the rate in the A and B groups rising steadily with increase in the length of service, while neither the C and D groups, with only a small number of cases, showed any increase in the rate.

The annual death rate from tuberculosis for the three-year period ranged from 2.3 per thousand in group C and no deaths in group D to 19.5 and 12.8 in groups A and B, respectively. The average for all the groups was 14.1, which is higher than the death rate for all causes in the general population and very much higher than the corresponding rate in an ordinary industrial population. In addition to the high mortality rate from tuberculosis the study showed that the percentage of mortality from pneumonia among granite cutters was 22.1 as compared with a percentage of 10.9 of all nontuberculous deaths among all occupied males in 1908 and 1909.

Conclusions

Some of the most important facts brought out by the study were the sharp correlation between length of exposure to the dust and the prevalence of tuberculosis, which requires a long period, usually 20 years or more, before it becomes evident; the large proportion of the workers who die from tuberculosis and the almost invariably fatal form of the disease within a short time after its appearance; the absence of deaths from silicosis itself, tuberculosis apparently always intervening; the high incidence of severe sickness other than tuberculosis, and the failure of workers to recover from their condition upon going into nondusty trades.

The study showed that the prevalence of silicosis has increased with the use of hand pneumatic tools. While ventilating devices have improved, nevertheless the dust counts for the hand pneumatic-tool operators showed that conditions have not changed materially since the introduction of the tool. The safe limits of exposure as shown by the study seemed to be between 9,000,000 and 20,000,000 particles per cubic foot of air, although it is not regarded as positive that persons could be exposed for many years to an atmosphere of 20,000,000 particles without harm.

Physical Impairment in Clerical Occupations

A STUDY of the extent of physical impairment in clerical occupations, made by Dr. Carey P. McCord for the Retail Credit Co., Atlanta, Ga., a summary of which is published in Industry Report, October, 1929, covers the investigation of the physical status of 1,000 male clerks.

The primary purpose of the study was to throw some light upon average conditions of health, with a view to estimating how much concealment or nondisclosure of impairments may exist in a group of people who are seeking insurance, but the results also furnish a basis for estimation of average health conditions in nonhazardous employment and of the added impairment arising in more dangerous trades.

The fact that work in itself is a source of physical impairment and ill health has long been recognized, and although the clerical worker is not subjected to many of the hazards to which industrial workers are exposed, such as dust, fumes, gases, poisonous substances, etc., he is subject to a greater degree of mental strain than the industrial or mercantile worker, so that, the report states, "it may not be maintained at this time that all clerking work exacts no toll or that the sedentary aspects of clerking does not in itself constitute a source of body depletion." It is pointed out as a possible factor in the health situation, however, that clerical employment may often be selected by less robust types or persons who have actually failed in strenuous occupations.

The physical examinations were made in 15 Cincinnati establishments, including railroad offices, banks, insurance companies, gas and electric companies, and city hall and county courthouse. Only those employees were examined who volunteered, and as they were assured that the results of the examination would be entirely confidential from their employers and others, there was no disposition to conceal important facts.

The examination consisted of a medical, social, work, and recreational history; a preliminary medical examination covering weight, height, deformities, etc.; an exact physical examination; urinalysis; and X ray and other special tests when indicated. All the data concerning defects and impairments were assembled according to the age grouping of the persons examined. It was found that only 4.1 per cent were below the age of 25, and 15.8 per cent were 55 years and over.

The normal weight for height and age was based on insurance mean standards. Only 26.4 per cent of all the persons examined were found to be within 10 pounds of the standard, while 14.7 per cent were from 10 to 19 pounds in excess of their standard weights, and 27.5 per cent were 20 pounds or more overweight. Substandard weights varying from 10 to 19 pounds were found in 13.8 per cent of the cases and underweight of 20 pounds or more in 17.4 per cent. A large proportion of the persons with substandard weights were in the lower age groups.

A large percentage of visual defects was found, 58.2 per cent of the persons examined suffering from a vision of 20/30 or more in one or both eyes. Of this number, 28.1 per cent had made no attempt at correction, while of those wearing glasses 59.8 per cent had failed to

obtain complete correction. While the total number of visual defects was not regarded as surprising, the large number wearing glasses which were not properly fitted was considered to be disturbing. The cause of this condition was believed to be either the use of corrective glasses after the eyes had further changed or the use of glasses prescribed by unqualified persons.

A large amount of defective hearing was found, the trend upward beginning at about 33 years and increasing rapidly thereafter. Flat-footedness appeared from the study to be on the increase, especially among the younger groups. The most common defect found among the persons examined, however, was defective teeth—all but 40 persons having in excess of two unfilled cavities or four missing teeth.

Cardio-vascular disease was present in 36.1 per cent of the examinees, the incidence of heart disease increasing in every five-year age group up to 60 years of age. There seemed to be a significant relationship between cardio-vascular disease and weight, as there was a heart-disease incidence of 49.1 per cent in persons with weights 20 pounds or more in excess of standard.

Summing up the results of the study, it is found that of the 1,000 men examined, 781 were judged to possess physical defects that constituted handicaps or that might eventuate in serious handicaps; 213 had minor physical defects, and only 6 were classified as essentially free from physical abnormalities. The high frequency rates for heart disease were in line with the present trend of heart-disease occurrence, all recent investigations having established mounting rates for cardiac disease. In 724 cases there were physical impairments of varying importance which were either unknown to the persons examined or of which they did not admit knowledge.

The study brings out further the importance of degenerative-disease prevention and control. Major epidemics have been controlled and sanitation improved so that the outstanding need at the present time seems to be the proper preventive care of the individual. Such control centers in the careful physical examination of persons apparently well which should be repeated periodically and followed up by suitable remedial treatment.

The author states that until further studies have been made supplementing the data of the present study, it becomes necessary to assume one of the following hypotheses: Either that all males exhibit a high incidence of physical defects, that clerking is an occupation conducive to the rapid production of physical impairment, or that the male personnel in clerking occupations is recruited from the frail and sickly. Past work and general impressions, however, are said to point to the first as the outstanding contributory cause.

Sickness Among Industrial Employees During First Quarter of 1929 [1]

THE frequency of cases of disabling sickness among the members of about 35 sick-benefit associations in industrial establishments is shown by studies carried on regularly by the United States Public Health Service. It is proposed to use the reports from some of these

[1] United States Public Health Service. Public Health Reports, Sept. 13, 1929, pp. 2204–2207.

associations to establish a current index of illness so that the changes in the morbidity picture which such a picture will show may serve as a point of attack in the institution of preventive measures to reduce the incidence of disease.

The present study is the first attempt, therefore, to provide fairly current information on industrial morbidity. It is planned to issue the results of these studies quarterly, showing the rates for the current quarter with the rates in the corresponding period of the preceding year. The sickness rates will be presented for male employees in industrial establishments for which reports have been obtained for both years. The present tabulation covers 13 establishments having a combined working force of approximately 100,000 male employees. As pointed out in previous studies, the recorded illness rate understates the real extent of sickness causing disability for more than one week, since the reporting associations do not pay for illness arising from certain diseases or causes.

The following table shows the frequency of disabilities lasting eight consecutive days or longer among male industrial employees, in the first quarter of 1929, compared with the first quarter of 1928:

FREQUENCY OF DISABILITIES LASTING EIGHT CONSECUTIVE DAYS OR LONGER, FIRST QUARTER OF 1928 AND 1929, AMONG APPROXIMATELY 100,000 MALE EMPLOYEES IN 13 INDUSTRIAL ESTABLISHMENTS

Disease causing disability	Number of disabilities in first quarter of—		Annual rate of disabilities per 1,000 men based on returns in first quarter of—		Per cent of increase or decrease in rate in 1929
	1928	1929	1928	1929	
Respiratory diseases:					
Influenza and grippe	817	2,271	32.9	86.5	+163
Bronchitis	192	179	7.7	6.8	−12
Pneumonia, all forms	108	143	4.3	5.5	+28
Diseases of the pharynx and tonsils	176	175	7.1	6.7	−6
Other respiratory diseases	206	181	8.3	6.9	−17
Total respiratory	1,499	2,949	60.3	112.4	+86
Nonrespiratory diseases:					
Diseases of the stomach, diarrhea, and enteritis	163	152	6.6	5.8	−12
Other diseases of digestive system	209	267	8.4	10.2	+21
Diseases of the circulatory and genito-urinary system, and annexa	247	237	9.9	9.0	−9
Diseases of the nervous system	143	144	5.8	5.5	−5
Diseases of the skin	119	132	4.8	5.0	+4
Epidemic and endemic diseases, except influenza	148	157	6.0	6.0	0
Rheumatism—acute and chronic	175	178	7.0	6.8	−3
Lumbago and other diseases of the organs of locomotion	117	125	4.7	4.7	0
Ill-defined and unknown causes	67	58	2.7	2.2	−19
All other diseases	166	136	6.7	5.2	−22
Total nonrespiratory	1,554	1,586	62.6	60.4	−4
Total cases of sickness	3,053	4,535	122.9	172.8	+41
Nonindustrial injuries	272	299	10.9	11.4	+5
Total, sickness and injuries	3,325	4,834	133.8	184.2	+38

Average number of males covered in the records: First quarter of 1928, 99,982; first quarter of 1929, 106,417.

The figures show an increase of 38 per cent in the incidence rate of disabilities lasting more than one week in the first quarter of 1929 as compared with 1928. The respiratory diseases, especially influenza and grippe and all forms of pneumonia, were responsible for a

large part of the increase. For the respiratory disease group as a whole the rate was 86 per cent higher in 1929, while the influenza epidemic which was still raging in the early part of the year was responsible for the increase in the rate for influenza and grippe of 163 per cent. Among the nonrespiratory diseases, increases in the rate were shown only for diseases of the skin and of the digestive system.

Industrial Medical Service in a Group of Chicago Plants

THE results of a survey of the nature and scope of the medical and surgical service rendered by a group of industrial plants in Chicago, which was made for the Board on Traumatic Surgery of the American College of Surgeons by Dr. E. W. Williamson, were published in the Bulletin of the American College of Surgeons, September, 1929 (pp. 31–42).

The group studied represented a variety of industries, including manufacturing of metals, machinery, conveyances, wood products, leather, chemicals, oils and paints, printing and paper goods, clothing and food; public utilities; department stores and mail-order houses; and building construction. In addition to visits to these plants or enterprises, insurance companies, particularly those operating medical departments for the treatment of injured employees, were visited as were, also, physicians and surgeons associated with industry, and the office of the State Industrial Commission.

The study revealed that the majority of the Chicago industries having medical departments place the administration of the medical service under one of the other main divisions of the organization, although there were certain large companies in which the medical service is in the charge of a chief medical officer with full administrative responsibility. This plan of organization is recommended in the report, which points out that too often large industries assign the administration of the compensation and medical department to the claim division, with the result that the legal aspect is uppermost and the medical service extends no further than the employment of a physician to treat the injuries which may occur. While the closest cooperation between the medical, personnel, employment, safety, and claim departments is regarded as highly important, a policy which leaves the decision of medical questions and the appointment of physicians or surgeons to persons not belonging to the profession is considered to be a mistake.

The large industries in Chicago which maintained an extensive medical and surgical service usually employed full-time physicians, although some of these providing an all-day service had adopted a policy of employing all physicians on a half-time basis or allowing them some time for private practice. This arrangement, they believe, is desirable as it permits these physicians to develop medical interests outside the industry, which has a more beneficial effect on their professional life than continuous confinement to the routine of the dispensary. The part-time position is recommended, therefore, as it affords a field for practical training in industrial medicine and surgery—a specialty in which educational facilities are acknowledged

to be limited. The employment of a physician on call is considered unsatisfactory because under this arrangement there is no responsibility on the part of the physician for health conditions in the plant and the relationship between the physician and the industry is not close enough for efficient service.

The study showed that various reasons were operative in the choice of the plant physician, such as his professional qualification, local reputation as an industrial surgeon, location near the industry, agreement on fees for professional services, personal reasons (such as acquaintanceship or relationship with an official of the company), and recommendation of the insurance company carrying the risk. Such a list indicates that sufficient emphasis is not always placed upon qualification for the position as a major requisite in the selection of a physician.

Specialists, including consultants, dentists, and physiotherapists, seldom have official connection with the Chicago industries it was found, and oculists and optometrists are not often used by industry in spite of the fact that defective eyesight is a common cause of accidents.

In most cases nurses are graduates and for the most part competent to carry on the work but in cases where the physician is on call the nurse usually treats minor injuries and prescribes simple remedies—a practice which the report condemns as without justification.

Only the largest industries maintained fully equipped and independent medical departments. Such industries usually obtain complete case records. In establishments maintaining a limited service—that is a dispensary equipped for first aid, treatment of minor injuries and illness, and re-dressings—the records commonly relate to injuries only and consist of the employer's report of the injury and the physician's report of the findings, diagnosis, and treatment. Better recording of clinical data is advocated in the report in order to provide adequate material for analysis and comparative study.

It is the practice of practically all small industries to provide only a first-aid cabinet. Such provisions can result only in inefficient care in emergency cases, and the result of such minimal equipment is said to be maximum absenteeism due to illness and injury.

Some indemnity companies which write a large amount of industrial accident insurance employ industrial physicians in the district to treat injuries occurring in the plants of policyholders but others operate medical departments for the treatment of injuries. This competition is said to discourage many capable surgeons from entering the field of industrial medicine. The indemnity companies' reasons for operating medical departments include greater economy, better control of cases, reduction of total disability in many cases, the opportunity for the use of physiotherapy in selected cases, thus reducing the amount of permanent total disability, and the prompt settlement of claims. On the other hand, the relationship between these physicians and the employees, the report states, is so remote that the latter are deprived of the full benefit of medical service. The medical profession, however, is said to have been remiss in the development of a standardized health and accident service, although where the medical service has been extended to

include the direction of health measures, physical examinations, etc., the results have shown a decrease in compensation costs.

The qualifications of a physician for industrial medical service are listed as training and experience, familiarity with the work processes in the plant, temperamental fitness for handling industrial patients, familiarity with the compensation law, and executive ability.

A recent report in the Labor Bulletin published by the Illinois Department of Labor states that between 50,000 and 55,000 compensable accidents, three-fifths of which are in the Chicago area, are reported yearly. The cost of these accidents to employers and employees is estimated at $25,000,000, and the loss from noncompensable accidents in employees' earnings and incidental cost to employers is estimated to be $16,000,000. The average net loss in earnings to injured employees after the payment of compensation is $83.79, compensation payments making up for only 38.7 per cent of the earnings lost, and the total cost per accident (consisting of net loss of earnings to the employee and compensation and incidental cost to employer) is approximately $348.

Large as these figures are, the statement is made that illness causes at least five times as much lost time as results from accidents and "it is evident that there is yet much to be done in the extension and elevation of medical care. This neglected field includes the correction of physical defects, treatment of minor illnesses, physical examinations, and health education."

INDUSTRIAL ACCIDENTS AND DISEASES

Accident Prevention from the Standpoint of the State

THE importance to the State of accident control, with its resultant conservation of human and economic resources, was the subject of an address by John P. Meade, of the Massachusetts Division of Industrial Safety, at the Eighteenth Annual Safety Congress.

The subject of accident prevention was considered mainly from the standpoint of the building industry, as it is in this industry particularly that hazardous conditions have multiplied to such an extent that they have outstripped the methods employed for their prevention. The estimated annual financial loss to the construction industry from work accidents in the State of Massachusetts is approximately $120,000,000, while the total cost of personal and property damages, including insurance premiums, loss of materials, and loss of wages, is believed to amount to more than $250,000,000.

In addition to the financial and property loss the severity of the accidents is such that there are a relatively large number of fatalities and cases of permanent disability and this loss of life or earning power by these workers, the majority of whom are in the prime of life, is therefore of vital importance to the family, the home, and the State.

Until comparatively recently, little had been done toward the prevention of accidents in the building trades and even now the accident-prevention work is hardly organized. To be adequate it would be necessary, the speaker said, to have an inspection force large enough to inspect all building operations daily, including alterations and repairs and especially the extrahazardous roofing operation.

The earliest example of State legislation in which the police authority to safeguard work places was exercised is said to be a law enacted in Massachusetts in 1877. This law required that machinery having movable parts, if placed so that it was dangerous to employees, should be safeguarded as far as practicable. The law was not specific enough, however, nor did it cover a wide enough field, as it was limited to factories and workshops and did not include machinery used in other kinds of industry. Effective accident prevention did not develop, therefore, until the various States recognized the fact that it was essential to utilize the experience of persons familiar with technical hazards in framing the laws. In Massachusetts the new type of legislation was first extended to the painting trade, and painting contractors generally cooperated in following the safety regulations and in registering their business as required by the law. Later revisions of the regulations extended the scope of the safety requirements and also provided for the protection of workers engaged

in spray painting. The Massachusetts Department of Labor has made a practice of investigating accidents in the building trades and has made a special point of inspecting building operations in which the painting is done by small contractors who are often former workmen without sufficient financial resources and who do not carry insurance for the protection of their employees.

In 1917 the State department of labor approved regulations for accident prevention in the construction industry which had been agreed upon by representatives of employers and workmen and which were subsequently enacted into law. These regulations included the safeguarding of floor openings; protection of material hoists; proper construction of working platforms, scaffolding, or staging; protection from falling material; provision of suitable types of ladders; maintaining stairways in safe condition; installation of proper devices to control the transmission and use of electricity of high voltage; the safeguarding of hoisting machines; and proper ventilation for heating apparatus used for the drying of plaster or other materials.

After the enactment of these regulations it was found necessary for their proper enforcement to have properly trained inspectors, and accordingly in 1919 a law was passed requiring at least four of the inspection staff to be men who had worked at least three years as building construction workmen. In 1927 an increased appropriation was secured for the inspection service and four more inspectors of building operations were added to the staff, thus providing a substantial increase in the protection provided for building-trades workmen.

The results of the inspection work are shown in the record for 1928. During that year 3,406 orders were issued to contractors, nearly all of them relating to hazards, in many cases these orders providing for the protection of employees working below stagings and around floor openings.

An example of what an organized safety program can achieve is shown in the building of a large railroad station with an adjoining amusement auditorium having a seating capacity of more than 17,000. This station, which was erected in Boston, was finished in 15 months with no fatalities or serious injuries. At one time 1,400 men were employed, while 70,000 people passed in and out of the terminal each day. The work was under the daily supervision of an inspector who personally supervised every change of staging, scaffolding, and working platforms. When necessary, other inspectors worked with him, and the contractors, subcontractors, employees, safety engineers, and insurance representatives all cooperated in the effort to make a good safety record. A similar record was attained in another large building job which lasted several months and on which the maximum number of men employed was 355. In each of these cases the general contractor was keenly interested in accident prevention and was actively supported in his efforts by his assistants.

In 1928 the eight inspectors of building operations made a total of 7,867 inspections throughout the State. In connection with the regular inspections, special investigations were made of a selected group of accidents for the purpose of determining in each case the cause of the injury. There was a total of 251 accidents studied,

117 of which occurred in building construction, 69 in painting, and 65 in roofing and alteration of buildings. Collapse of staging was the cause of 94 accidents, faulty scaffolding of 105, and the remainder were due to unprotected openings, falling materials, falling over objects, etc.

While the accident data for Massachusetts are not considered to show the sharp increase in the rates which has prevailed among the building trades in other sections of the country, they do prove clearly, it is said, that the construction industry presents a leading problem in the accident-prevention work of the State.

The following table shows the number of accidents, classified according to the type of disability, for the years 1925 to 1928:

NUMBER OF ACCIDENTS IN MASSACHUSETTS BUILDING CONSTRUCTION INDUSTRY, 1925 TO 1928

Type of injury	Number of injuries			
	1925	1926	1927	1928
Temporary disability	8,385	7,998	8,717	8,652
Permanent partial disability	104	93	106	111
Permanent total disability	1	1	6	----------
Fatalities	60	51	58	55
Total	8,550	8,143	8,887	8,828

In conclusion it was pointed out that there are certain difficulties to be met in carrying out a safety program in the building industry which are not found in most other industries. These include the more or less shifting group of employees, the fact that often the work has to be completed with all practicable speed, and the use of new methods which include the employment of high-speed mechanical devices, such as various types of hoisting and excavating machinery and the use of high-powered explosives. These add to the employment risks and, unless the accident-prevention work is efficient, increase the number of accidents.

Accident Costs in Coal and Metal Mines in the United States

INFORMATION circular No. 6166, issued by the United States Bureau of Mines, endeavors to estimate the approximate cost of accidents to the mining industry, including coal mines and metal mines, in order to present the saving possible through accident reduction or elimination. So much data on accidents and their cost are condensed in this circular that to summarize the information would hardly be adequate. The circular is therefore reproduced almost in its entirety.

"In 1926 (the last year for which complete figures have been published) the coal mines of the United States produced 657,804,437 tons of bituminous coal and anthracite, and employed 759,033 men. In that year 2,518 men were killed by accident in and about coal mines. The United States Bureau of Mines does not get complete figures on nonfatal accidents in coal mines, but figures gathered for a

4-year period from certain mines which were competing in the national safety competition conducted by the Bureau of Mines indicate that roughly about 71 nonfatal accidents involving loss of time of one or more working days occur to every one fatal accident. It can be estimated, therefore, that in 1926 there were about 181,300 accidents in coal mines involving loss of time, including fatalities.

"The average number of days lost per accident, including fatal accidents and permanent total disability cases, figured at 6,000 days' lost time each and again using an average from this safety contest, is about 117 days; 181,300 accidents at 117 days' lost time per accident gives a total of 21,212,100 days lost due to coal-mine accidents. On a wage basis of $5 per day this would mean an annual loss to the coal miners in wages of $106,060,500. In industry generally, according to the National Safety Council, over 50 per cent of the lost-time injuries are of such short duration that no compensation is paid to injured men; in the case of a fatality the amount paid to heirs of the deceased amounts usually to only a small fraction of the 6,000 days' wage loss, an average figure generally used in figuring lost time from fatal accidents. The National Safety Council, therefore, estimates that the total compensation paid in case of all accidents averages about one-ninth of the wages lost. On this basis the coal miners of the country annually lose about $94,000,000 in direct wage loss due to accident, or about $124 per man employed. This average includes the cost of fatal accidents and permanent disabilities, but even if the cost of fatal accidents is deducted, the average cost to the individual miner annually for nonfatal accidents is about $36. The loss to the coal-mine operator through accidents is estimated to be at least that of the employee, but is not so easy to figure directly. In one way or another he pays the compensation to the miner either directly or through an insurance company. He pays for interruptions of production due to accident, for replacement of workmen and for breaking in new men, for damage or destruction of property, for disturbed industrial relations likely to result from accidents, for reduced morale and efficiency of employees, for medical and hospital care, for court costs of settling disputed cases, and probably for other items. It is likely, therefore, that the total loss financially to employer and employee in the coal-mining industry in 1926 through accident occurrence amounted to about $188,000,000. On an output of 658,000,000 tons, $94,000,000 loss to the operator amounts to about 14 cents in cost per ton of coal mined or an important part of production cost, in many instances representing the difference between profit and loss.

"Metal-mine costs due to accident may be similarly figured. The United States Bureau of Mines obtains accurate figures on the number of lost-time nonfatal accidents as well as fatal accidents in the metal-mining industry. In 1926 the metal mines employed 127,823 men; 430 men were killed and 30,350 men received lost-time but nonfatal injuries as a result of accidents. There was an average of 114 days' lost time [1] for each of these fatal and nonfatal injuries, again computing a fatality as 6,000 days' lost time. This is equivalent to 3,523,944 days' time lost due to accident, or at $5 per day per man, to a wage

[1] U. S. Bureau of Mines. Bul. No. 292: Metal-mine accidents in the United States, 1926, by W. W. Adams. Washington, 1928, p. 65.

loss of $17,619,720. Again deducting one-ninth of this figure for compensation paid, the metal miner loses in wages annually about $15,700,000, or about $122 per individual. This average loss per individual includes the cost of fatal accidents reckoned at 6,000 days or $30,000, but even if the loss in time due to fatal accidents be deducted, the average cost to each individual metal miner each year for nonfatal accidents is about $32.

"Estimating the loss to the metal-mine employer as about the same as that to the employee, the annual cost of metal-mine accidents to the employer is about $15,700,000 and to employer and miner is $31,400,000.

"The above figures show that accidents represent a large annual financial loss to mining companies and to miners. Some considerable portion of this loss is also borne by the consuming public. State, company, Federal, and miners' organizations have conducted much work toward accident prevention. What have been the results? Generally speaking, it may be said that some individual companies both large and small have achieved a remarkable accident reduction. Metal-mine accidents have decreased to some extent. Coal-mine accidents, if anything, have shown a recent tendency to increase."

"The following tables give average fatality rates for the coal and metal mines of the United States as calculated by the U. S. Bureau of Mines.[2]

AVERAGE FATALITY RATES AT COAL AND METAL MINES OF THE UNITED STATES

Period	Coal mines [1]			Metal mines: [2] Men killed per 1,000 300-day workers
	Men killed per 1,000 300-day workers	Average coal production per man (tons per day)	Deaths per million tons	
1906–1910	5.49	3.10	5.89	
1911–1915	4.65	3.26	4.76	4.01
1916–1920	4.03	3.48	3.86	
1921–1925	4.58	3.85	3.96	[3] 3.23
1926	4.50	3.92	3.83	3.47
1927			3.70	

[1] Total coal miners killed by accident, 1906–1927, inclusive=53,787.
[2] Total miners killed by accident, 1911–1926, inclusive=8,399.
[3] Years included are 1921–1925.

"The fatality rate in coal mines per million tons of coal production (3.96) in the period 1921–1925 had decreased about 33 per cent as compared with the period 1906–1910 (5.89) and showed further slight decreases in 1926 (3.83) and in 1927 (3.70). This decrease has been coincident with an increased production per man of almost one-third. However, any accident figures based on tonnage production have little or no relation to the question as to whether mining is becoming more or less hazardous; more efficient mining methods and devices have increased the tonnage output per man and therefore a lessened accident rate would be expected even though the accident rate on a time-exposure basis remained approximately unchanged. The tabu-

[2] U. S. Bureau of Mines. Bul. No. 293: Coal-mine fatalities in the United States, 1927. Washington, 1929, p. 3.

lated figures of fatal accidents based on men killed per thousand 300-day workers, a method of calculation based on a time-exposure or frequency basis, show that the apparent large accident reduction on a tonnage basis is not a real one. The fatal accident rate for 1926 (4.50) based on men killed per thousand 300-day workers is indeed lower than that of the period 1906–1910, but there has been little change during the period 1911–1926, the fatality rate during the years 1921–1925 being definitely higher than that from 1916 to 1920.

"The fatality rate based on men killed per thousand 300-day workers in metal mines showed a general decrease during the period 1911 to 1925. The increase in 1926 is due to one mine inundation, which resulted in the deaths of 51 men. In recent years many of the larger mines have expended much time and money designed to improve ventilation and haulage and thus gain more efficiency and safety.

"On first thought the accident figures presented above might make one skeptical as to whether safety efforts have been worth while, particularly in coal mining. However, no one can say how many more fatalties might have occurred had not there been accident-prevention work attempted. Effort has been successfully made to increase production per man, mines have gone deeper with increasingly difficult ventilation, roof control, and haulage problems, and there have been changing mining methods. All of these factors tend toward increased accidents. Also some safety work has been very perfunctory in character. Mention has been made of the fact that some companies have obtained rather remarkable results in accident reduction. This accident reduction has been achieved by hard, continued, intelligent safety work in which supervision, discipline, safeguards, and education have played the most important part. The higher company officials have made it plain to subordinate officials and employees that safety results were expected and to be secured and that the necessary company backing was behind all safety measures.

"The Bureau of Mines has concluded from its work with mine operators, State mine-inspection departments, and miners' organizations that the following factors are among those vital to the lessening of accidents in the mining industry.

"1. The mine management from the top down and including all subordinate officials must be thoroughly converted to the idea and practice of safety. Without whole-hearted interest on the part of the management, all other measures are likely to fail.

"2. The mining company should have a safety organization of officials and miners. This organization should work continually toward the study and betterment of safety conditions in the mine, the investigation and fixing of responsibility for all accidents—including noninjury accidents, and the education of officials and miners in proper safety practices.

"3. The mining company should follow out the safety requirements in the State law and should have such additional safety rules as are needed to cover local conditions and practices not possible or perhaps desirable to control by general legislation. Measures should be taken to insure that officials know these laws and rules and that miners know

at least such portions of them as directly concern their safety and that of others.

"4. The mining system and the number of officials should be such that rigid discipline in regard to safety should be possible and practiced at all times. It should be possible properly to discipline a careless or willfully unsafe man whether an official or a miner. Such men if not amenable to discipline belong outside of the mine.

"5. The mine officials and miners should be educated in safety and accident prevention. This education is more or less a continuous process.

"6. The press for mine production must not be allowed to outweigh or precede safety considerations.

"7. Adequate mechanical safeguards should be provided for all mechanical and electrical equipment in order to minimize the man-contact hazard with moving machinery or with electricity.

"8. Each State should have a code of mine safety laws adequate to cover the requirements of mine safety; it should have an inspection department adequately manned and financed with a personnel trained, alert, and with the power properly to preserve the safety of miner and mine official. Authority should be invested in a committee or commission to change or promulgate new rules and regulations as the changing conditions of mining require."

Fatal Accidental Falls

AN ANALYSIS of the fatalities due to accidental falls among the industrial policyholders of the Metropolitan Life Insurance Co., published in the company's Statistical Bulletin, August, 1929, shows that nearly one-half of the 4,343 deaths from this type of accident in the period 1926–1928 occurred in the home. Of these, one of every three was due to a fall on stairs, one of every ten to a fall from a window, and one of every eight to slipping or falling on floors. Falls in public places accounted for 19 per cent of the total mortality from this cause, 43 per cent of these accidents occurring in the pedestrian use of streets and sidewalks.

Falls incidental to employment comprised 15 per cent of the total number of fatalities, nearly 10 per cent occurring in building construction, while falls from a scaffold or staging, from ladders, roofs, windows, and into the holds of ships were the cause of a large proportion of the other industrial falls.

The following table shows the number of deaths from falling, by origin of hazard.

FATAL ACCIDENTAL FALLS AMONG INDUSTRIAL POLICYHOLDERS OF THE METROPOLITAN LIFE INSURANCE CO., 1926–1928, BY ORIGIN OF HAZARD

Origin of hazard	Males		Females		Total	
	Number of deaths	Per cent	Number of deaths	Per cent	Number of deaths	Per cent
Industrial	660	25.4	9	0.5	669	15.4
Public:						
Transportation	11	.4	2	.1	13	.3
Sports and recreation	41	1.6	5	.3	46	1.1
Pedestrian use of streets	216	8.3	132	7.6	348	8.0
Use of public buildings	80	3.1	51	2.9	131	3.0
Other public accidents	239	9.2	49	2.8	288	6.6
Total, public	587	22.6	239	13.7	826	19.0
Domestic	851	32.8	1,150	65.8	2,001	46.1
Not specified	498	19.2	349	20.0	847	19.5
Total	2,596	100.0	1,747	100.0	4,343	100.0

Death of Pioneer in Safety Work

DAVID VAN SCHAACK, director of the bureau of inspection and accident prevention of the Aetna Life Insurance Co., died suddenly on November 13, 1929.

Mr. Van Schaack was a pioneer in the safety movement. He was one of the committee which organized the National Safety Council, and later served twice as its president.

He was also the author of two books on accident prevention: Safeguards for the Prevention of Industrial Accidents, and Woodworking Safeguards, published, respectively, in 1910 and 1911. He was a frequent contributor to safety literature.

Mr. Van Schaack had been a member of the Standards Council of the American Standards Association since 1922, and had taken a prominent part in the development of the national safety code program as a member of the safety code correlating committee from its organization. He had been chairman of this committee for three years prior to his death.

Fatalities in the California Petroleum Industry, 1928

SHOWING an upward trend for the first time since 1923, fatalities in the California petroleum industry for the year 1928 numbered 47, which is an increase of 14.6 per cent over 1927. Of the 47 fatal accidents in 1928, 30 occurred in the drilling and producing division, 1 in the pipe-line and transportation division, 14 in the refining division, and 2 in the sales and marketing division. The largest percentage of increase was in the refineries and natural-gas plants, where 9 fatal accidents occurred in 1927 and 14 in 1928, an increase of 55 per cent. These facts are brought out in a recent report of investigations issued by the United States Bureau of Mines, entitled "Review of Fatalities in the California Petroleum Industry During the Calendar Year 1928" (serial 2596).

The increase in the number of fatalities in the drilling and producing division was due largely to an active drilling campaign carried on in California in 1928. There were 18 fatal accidents at drilling wells in 1928, as compared with 5 in 1927; and the monthly average number of drilling wells increased from 404 in 1927 to 520 in 1928. Based on these totals, the average number of drilling wells per fatality is 28.8 in 1928 and 80.8 in 1927. In other words, the number of drilling wells for each fatal accident in 1928 was 52 less than in 1927.

The fact, as stated, that many of the accidents in the drilling and producing division were repetitions of similar accidents that occurred in 1927, would seem to indicate a certain laxness on the part of the industry in allowing the recurrence of the types of accidents with which it is familiar and for which accident-prevention measures are available. Continuing, the report states:

Fourteen, or approximately one-half of the fatalities in this division were charged to falling objects. As a matter of fact, this classification can not be considered the primary cause of those accidents. The falling object was not the cause but rather the active agent. The real cause lies further back, and in nearly all cases carelessness and inattention were the controlling factors. These two elements can be eliminated only by greater supervision and a persistent campaign of education. Only one accident was caused by the failure to provide guards such as are required in the petroleum safety orders for drilling and producing operations issued by the Industrial Accident Commission of the State of California.

Along with the reduction in the number of producing wells from 11,276 in 1927 to 10,823 in 1928 there was a marked reduction in fatalities at these points—from 8 to 3. The fatality index per hundred million barrels of oil produced in the State increased somewhat, as the following statement shows:

	Number of deaths	Deaths per hundred million barrels produced
1923	59	22.3
1924	44	19.1
1925	31	13.5
1926	26	11.5
1927	26	11.2
1928	30	12.9
Average	36	15.0

A 55 per cent increase in fatalities is noted in the refining division, 9 deaths occurring at refineries and 6 at natural-gas plants. In 1927 there was only one fatality directly attributable to actual refining work.

The report is made up largely of detailed reports of individual accidents.

Industrial Accidents in Massachusetts, 1927–28

A SUMMARY of the experience of the Department of Industrial Accidents of Massachusetts in the administration of the workmen's compensation law, covering the year ending June 30, 1928, is contained in a report recently issued by the department.[3] During the year there were 158,990 accident reports filed, of which 60,330, or 37.9 per cent, were tabulatable. Death resulted in 340 instances (23 more than the preceding year), 12 involved permanent total

[3] Massachusetts. Department of Industrial Accidents. Public Document No. 105: Annual report for the year ending June 30, 1928. Boston, 1929.

disability, 1,197 were of permanent partial nature, and 58,781 were temporary injuries. It appears that the weighted time loss chargeable to these injuries was 4,542,916 days, of which fatalities accounted for 44.9 per cent, temporary total disabilities for 34.7 per cent, permanent partial disabilities for 18.8 per cent, and temporary disabilities for 1.6 per cent.

Insurance companies reported that payments made and to be made aggregate $8,976,147, distributed as follows: Fatal cases, $1,028,496; nonfatal cases, $5,063,723; medical payments, $2,883,928. The average cost of all tabulatable cases was $148.78 as compared with $124.96 for the preceding fiscal year. An increase in the maximum compensation from $16 to $18 per week and from $4,000 to $4,500, and the increase in the number of fatal accidents, are given as two factors responsible for this increase. Except in a few instances, some of which are noted here, the report makes no comparisons with preceding years.

The building trades had the highest number of tabulatable injuries, 8,828 or 14.6 per cent, being the first in the number of deaths (with 65, or 19.1 per cent) as well as in temporary disabilities (with 8,651 or 14.7 per cent). Transportation was responsible for the second highest number of fatalities, while in total number of injuries trade came second with 14 per cent followed by the textile industry with 11.2 per cent. Considering the matter of severity as measured by days lost, the building trades again topped the list with 784,766 days. Transportation was second with a loss of 615,157 days.

Indicating in some measure the economic loss involved, although the number of employees in each group is not given, the report notes 13,023, or 21.6 per cent, of the total tabulatable injuries as occurring to those receiving $35 and over per week; and more than half were receiving over $25.99 per week.

Cuts, punctures, and lacerations accounted for 32.5 per cent of the injuries; there were 5,215 cases (8.7 per cent) resulting in infection, 18 of these terminating in death; handling objects caused 19,046, or 31.6 per cent, of the injuries, while machinery caused the largest proportion of days lost (20.7 per cent). There were 1,069 cases of specific injuries, and in 88 or 8.2 per cent of these the employees were more than 55 years of age, while 7 occurred among children under 16 years of age.

There are tables elaborating the facts noted, making a rather complete report; no attempt has been made, however, to compute accident rates.

Occupational Diseases Investigated in Massachusetts in 1928 [4]

THERE were 292 cases of occupational disease investigated in Massachusetts during 1928, according to a report for that year issued by the division of industrial safety. The majority of the cases and all of the four fatalities occurred among men, only 32 cases being reported among women. One fatality each was the result of lead

[4] Massachusetts. Department of Labor and Industry. Division of Industrial Safety. Report for the year ending Nov. 30, 1928. Reprint from the annual report. Boston, 1929. Pp. 22-31.

poisoning, benzol poisoning, and inhalation of carbon monoxide gas, while the cause of the fourth death was not reported.

The following table shows the number of investigated cases of occupational disease, by cause:

CASES OF OCCUPATIONAL DISEASE INVESTIGATED IN MASSACHUSETTS IN 1928

Disease	Number of cases	Disease	Number of cases
Industrial dermatitis	123	Benzol poisoning	4
Lead poisoning	41	Anthrax	7
Gas poisoning	30	Dust inhalation	4
Acid and oil fumes	22	Tuberculosis	1
Chrome poisoning	27	All other	16
Eczema	12		
Cyanide poisoning	5	Total	292

The industries in which the diseases occurred were as follows: Tanneries, 60 cases; textile, 48; mechanical, 38; rubber mills, 24; foundry, 19; metal trades, 13; shoe manufacturing, 10; chemical manufacturing, 9; printing, 5; woodworking establishments, 2; paper mills, 1; mercantile, 1; and miscellaneous, 62.

Investigation of the causes showed in numerous instances that working conditions and equipment were at fault. For example, in 15 cases of lead poisoning occurring in foundries and metal-refining establishments, although exhaust systems to remove dust or fumes had been installed in the workrooms, mechanical inclosure at the point of origin was found to be inadequate and the employees had consequently inhaled toxic fumes.

Practically the same condition was found in a brass foundry where four cases of lead poisoning had occurred. In addition to altering the mechanical inclosure additional exhaust equipment was provided and furnaces were relocated in another room. In all the plants in which lead poisoning had occurred better exhaust equipment, the use of gloves and respirators, and provision of a suitable lunch place and of proper washing facilities were among the measures taken to improve conditions.

Although the report states that proper measures had been taken for the protection of workers using benzol in different processes in four factories, one case of poisoning had occurred in each of these factories. The case which resulted fatally was in an asbestos textile plant, the employee in question becoming ill and dying while new apparatus was in process of installation for the purpose of reclaiming a greater amount of the benzol.

The increasing frequency of industrial dermatitis is shown by the large proportion of cases due to this cause. Investigations made in the 123 cases reported showed that they were nearly all due to contact with irritant dusts or acids. Better containers and the use of rubber gloves were recommended as safety measures and installation of adequate washing facilities and furnishing medical supplies was required in some cases, while in one plant where a number of cases had resulted from the materials used in compounding an accelerator the injurious substances were eliminated from the compound and the incidence then subsided.

In practically all the occupational disease cases investigated either defective or inadequate equipment was found or employees were not properly safeguarded in other ways, even in factories where it was reported that proper measures had been taken for their protection.

New Jersey Industrial Disease Investigation Bureau

THE Industrial Bulletin, September, 1929, published by the New Jersey Department of Labor, contains an account (pp. 11–15) of the operation of a new bureau for the investigation of industrial diseases, for the period January 1 to June 30, 1929. For some years it had been the practice of the department of labor to make a more or less superficial investigation of reported cases of occupational disease, but it was realized that under this procedure many cases were either not discovered or were not reported and that a more thorough method of investigation was necessary.

The new bureau is in the charge of a field director who is acquainted with the industrial activities of the State and knows, therefore, which industries offer special exposure to the hazards of occupational poisoning or disease. The director decides upon the occupational groups that may need physical examinations and makes the arrangement with the plants in question for the examination of the employees. In connection with the physical examinations which are made by the medical director, blood and other laboratory tests are made and a trade history which includes an accurate employment record is taken of each case. The services of a consulting chemist are available in cases where trade substances are used the composition of which is not clear or when there is a lack of general medical knowledge as to their toxicity.

In addition to the detection of cases of industrial poisoning and the improvement of plant working conditions, it is the purpose of the bureau to make a scientific study of the cases of occupational disease and to carry on a campaign of education as to these hazards among physicians, employers, and employees. As the average physician is unskilled in the diagnosis of occupational diseases, it may happen frequently that compensation is denied to workmen entitled to it through the failure of the attending physician to recognize the fact that the disease was a result of the employment. To remedy this situation and to serve as a center for the dissemination of information is one of the important purposes of the bureau.

The work of the bureau during the first half year included the inspection of 29 plants for the existence of occupational health hazards. In 10 of these plants benzene or its homologues or derivatives were used, the industries including dye works, perfume factories, chemical plants, and the manufacture of artificial leather. Lead was used in 11 establishments, mercury in 7, and chrome poisoning was a hazard in 1. The lead-using industries included smelters and the manufacture of reflectors, storage batteries, chemicals, pottery, lead colors, and tetraethyl lead. Mercury was used in four hat factories and in a chemical plant, a thermometer plant, and a storage-battery plant. Chronic mercurial poisoning was in evidence in the hat factories, where tremors were present in a large proportion of the men

seen in these shops. A special investigation, carried out in a plant manufacturing artificial leather and in a lead color plant, showed that 10 of the 89 workers examined in the first plant had symptons of chronic benzol poisoning and 8 of 21 persons examined in the second plant were suffering from lead absorption.

Industrial Accidents in Bulgaria, 1922 to 1926

A DETAILED statistical report on industrial accidents in Bulgaria from 1922 to 1926, inclusive, has been published recently in the Statistical Quarterly Review [5] by the State Central Statistical Office.

The results of the accidents are shown by the following table:

TABLE 1.—NUMBER OF ACCIDENTS IN 1922 TO 1926, BY DEGREE OF SEVERITY

Severity	Number of accidents				
	1922	1923	1924	1925	1926
Temporary disability lasting—					
1 to 7 days	158	154	80	127	174
1 to 2 weeks	97	113	108	170	237
2 to 4 weeks	90	77	126	175	229
4 to 6 weeks	44	52	63	95	93
6 to 13 weeks	48	45	84	86	101
13 weeks to 6 months	6	9	15	13	18
6 months to 1 year	1	1	1	2	4
Unknown	4				45
Total	448	451	477	668	901
Permanent disability:					
Partial	68	88	95	114	107
Complete	16	10	9	4	4
Total	84	98	104	118	111
Total, disability	532	549	581	786	1,012
Deaths	45	44	56	77	48
Unknown	5	7	46	35	20
Total, all accidents	582	600	683	898	1,080
Number of establishments involved	216	225	323	464	487

The causes of the accidents are given in Table 2.

[5] Trimesechno Spisanie na Glavata Direktsia na Statistikata, published by the State Central Statistical Office, Sofia, April–June, 1929, pp. 72–106.

TABLE 2.—CAUSES OF ACCIDENTS, 1922 TO 1926

Causes	Number of accidents									
	1922		1923		1924		1925		1926	
	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal
Motors	1	6	------	8	5	12	2	4	1	11
Transmissions	4	8	3	7	8	14	8	19	7	19
Machines and instruments driven by mechanical power	3	105	1	91	2	137	5	173	2	215
Machines and appliances for lifting	------	5	1	1	------	4	------	3	------	8
Steam explosions	------	2	------	------	------	1	------	6	------	------
Explosives	5	34	7	28	6	34	3	16	4	24
Inflammable materials	------	15	11	23	1	29	24	33	1	53
Electrical current	1	1	1	------	------	------	------	1	------	3
Corrosives	1	------	------	1	1	------	1	1	3	7
Falls of objects	4	21	1	32	5	40	5	80	5	82
Stumbling over and striking against objects	------	7	------	17	------	11	1	27	1	50
Falls upon objects	1	32	3	50	2	41	3	39	2	65
Falls of workers	5	38	5	68	11	39	10	37	8	54
Handling of objects	------	77	1	48	1	60	2	133	2	135
Hand tools	------	53	1	55	------	73	1	122	------	108
Steam railways, locomotives, and cars	4	11	2	10	5	13	5	12	5	21
Locomotives and cars in mines and quarries	3	83	1	89	------	72	1	58	3	96
Cars on rails	------	5	------	9	1	17	------	16	------	29
Automobiles and trucks	2	2	1	4	------	1	1	3	1	4
Bicycles and motor cycles	------	1	------	1	------	------	------	5	------	4
Steamships	------	1	------	------	------	------	------	1	------	1
Vehicles	2	5	1	4	------	3	------	8	1	7
Animals	------	4	------	4	------	7	1	11	1	10
Diseases	8	9	3	2	3	11	2	3	------	------
Other causes	1	8	1	3	5	6	2	8	1	6
Unknown causes	------	4	------	1	------	2	------	2	------	20
Total, all causes	45	537	44	556	56	627	77	821	48	1,032

Accidents in the Mines of the Ruhr in 1928

A REPORT by the Employers' Accident Insurance Association of the Ruhr mining industry for 1928[6] shows that during that year 5,187 compensable accidents occurred as compared with 5,524 in 1927, the rate per 1,000 insured persons being 13.25 in 1928 and 13.27 in 1927.

While the proportion of accidents of all kinds varied little in the two years, there was a decided reduction in the number of fatalities. In 1927 there were 846 deaths, or 2.03 per 1,000 insured persons, and in 1928 the number had fallen to 734, or 1.88 per 1,000 insured.

Accidents caused by falls of coal or rock decreased from 2,100, or 5.04 per 1,000 insured persons, in 1927 to 1,607, or 4.11 per 1,000, in 1928. The number of accidents to workers going to or returning from their work places increased, however, from 40 in 1927 to 74 in 1928, due principally to the increasing dangers of mine transportation.

The employers' insurance association is giving special attention to the protection of the miners from occupational diseases such as silicosis and disorders of the muscles, bones, and joints caused by the use of pneumatic tools.

The social insurance costs of the coal operators of the Ruhr for 1927 and 1928 were as follows:

[6] Revue de L'Industrie Minérale, Paris, October, 1929, pp. 302, 303.

AMOUNT OF SOCIAL INSURANCE PAYMENTS IN MINES OF THE RUHR, 1927 AND 1928

[Conversions into United States currency made on basis of reichsmark = 23.8 cents]

Type of insurance fund	1927		1928	
	Reichsmarks	U. S. currency	Reichsmarks	U. S. currency
Sickness and pension funds	80, 200, 000	$19, 087, 600	76, 900, 000	$18, 302, 200
Invalidity and survivors' funds	14, 500, 000	3, 451, 000	18, 000, 000	4, 284, 000
Unemployment funds	14, 100, 000	3, 355, 800	14, 200, 000	3, 379, 600
Accident funds	28, 200, 000	6, 711, 600	30, 800, 000	7, 330, 400
Total	137, 000, 000	32, 606, 000	139, 900, 000	33, 296, 200

Industrial Accidents in Sweden in 1926

THE report of the State Insurance Institute of Sweden (*Riksförsäkringsanstalten*) for the year 1926 contains the latest available statistics on industrial accidents in Sweden.[7]

In that year the compulsory accident insurance covered 1,442,499 workers, of whom 947,024 were males and 495,475 were females; 112,842 of these workers were employed in establishments of the State.

There were reported to the insurance institute 72,870 industrial accidents during 1926, as shown by the following figures:

TABLE 1.—ACCIDENTS REPORTED IN 1926

Sex	Number of accidents reported	Accidents resulting in—	
		Permanent disability	Death
Males	68, 330	2, 275	416
Females	4, 540	221	26
Total	72, 870	2, 496	442

Industrial accidents, by industries and by number of workdays lost as a result of accidents in Sweden during 1926, are shown by the following table:

TABLE 2.—NUMBER OF ACCIDENTS AND WORKDAYS LOST IN 1926, BY INDUSTRY GROUPS

Industry group	Total number of accidents	Cases of permanent disability	Fatal cases	Number of accidents per 100 workers	Number of days lost per worker
Mining, ore dressing, and smelting	1, 222	34	8	14. 4	15. 71
Ore refining	3, 817	51	8	18. 0	9. 01
Metals	12, 080	148	23	15. 3	6. 87
Stone, coal, and peat	4, 265	130	21	13. 4	14. 91
Agriculture, forestry, and stock raising	10, 269	394	68	7. 0	9. 97
Lumber	6, 065	242	27	11. 3	13. 89
Paper and printing	4, 477	127	23	8. 1	9. 05
Food	2, 298	59	11	5. 9	5. 70
Textile and clothing	1, 079	31	8	1. 8	2. 36
Leather, rubber, and hair	592	19	1	3. 3	2. 58
Chemical	1, 211	29	18	8. 9	16. 19
Building	4, 747	178	23	9. 9	12. 61
Power, light, and water	634	16	7	6. 0	8. 62
Trade and storage	2, 590	63	10	2. 2	2. 01
Shipping and fishing	2, 931	99	66	11. 0	28. 28
Transportation	1, 963	29	14	5. 6	5. 59
Clerical and professional	261	16	2	. 6	1. 15
Municipal institutions	397	22	4	. 7	1. 49
Domestic service, hotels, etc	893	45	5	1. 6	2. 38
Miscellaneous	41	1	------	2. 1	. 71
All industries	61, 832	1, 733	347	6. 7	7. 34

[7] Sweden. Riksförsäkringsanstalten. Olycksfall i arbete år 1926. Stockholm, 1929.

The highest number of accidents per 100 workers occurred in ore refining, while the severest accidents as measured by number of workdays lost per worker occurred in shipping and fishing. In computing the severity rate 7,500 days are allowed for each death and for each case of permanent total disability. For partial disability 75 days are allowed for each per cent of total disability. The accident rate is based upon the number of workdays lost during the year.

Machine and hand tools caused the largest number of accidents resulting in permanent disability. Water transportation, explosives, and pumps caused accidents which resulted in the highest average per cent of total disability.

Industrial Accidents in Switzerland, 1918 to 1927

THE number of industrial accidents reported in Switzerland during the decade of 1918–1927 was as follows: [8]

TABLE 1.—NUMBER OF INDUSTRIAL ACCIDENTS IN SWITZERLAND IN 1918–1927

Year	Total number of accidents	Accidents resulting in—		Year	Total number of accidents	Accidents resulting in—	
		Permanent disability	Death			Permanent disability	Death
1918	71,779	1,252	235	1923	76,842	2,591	269
1919	91,338	1,884	278	1924	82,489	2,882	312
1920	94,792	2,497	336	1925	86,072	2,944	265
1921	72,903	2,260	277	1926	89,341	2,881	287
1922	67,547	2,166	247	1927	94,200	3,023	317

[8] Switzerland. Volkswirtschafts-Departement. Wirtschaftliche und Sozialstatistische Mitteilungen, Bern. Oct. 21, 1929, pp. 312–314.

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE

Legislative Action on Workmen's Compensation in 1929

IN PREVIOUS issues of the Monthly Labor Review[1] summaries have been made of 1929 legislative action on workmen's compensation. In this issue amendments to the workmen's compensation laws are shown for the States of California, Delaware, Georgia, Massachusetts, Nebraska, Ohio, Pennsylvania, and Porto Rico.

California

PROBABLY the most important change in the workmen's compensation act of California for the year 1929 was the increase in the maximum compensation from $20.83 a week to $25 (ch. 255). This addition will govern both permanent and temporary injuries where the wages earned by the injured employee are sufficient to increase the compensation to $25 a week. The death benefit of $5,000 was not changed. A second-injury fund was created (ch. 222) by assessing the employer, or his insurance carrier, $300 for every case of death of an employee who leaves no dependents.

Chapter 249 gives the industrial accident commission safety jurisdiction over the State and its political subdivisions. The industrial accident commission, by chapter 173, now has power to suspend or disbar attorneys, for good cause, from appearing before the commission, subject, however, to a hearing. An amendment (ch. 254) provides for 10 per cent additional compensation, with a maximum of $1,000, to go to the injured employee when employers willfully fail to carry compensation insurance.

All cases of serious and willful misconduct, whether the charge is made by the employer, employee, or by an insurance carrier, must now be decided by the industrial accident commission (ch. 227).

Every State agency is included (by ch. 165) under the definition of "employer." Chapter 174 gives the State insurance fund certain rights under the United States longshoremen's and harbor worker's compensation act.

An amendment (ch. 257) gives the commission authority to appoint not more than two deputy commissioners, to be selected from the staff, one of whom will have the right to sign routine documents requiring two signatures under the law. The purpose of this amendment is to prevent delay in the event one of the commissioners is away from the main office.

Two acts, chapters 657 and 679, affecting the State compensation insurance fund and the liability of insurance carriers were also passed.

[1] May, 1929 (pp. 135, 136); August, 1929 (pp. 85–88); September, 1929 (pp. 89, 90); October, 1929 (pp. 73–77); November, 1929 (pp. 52–55).

Delaware

THE workmen's compensation law of Delaware was amended in several respects. By chapter 252, coverage of the act is extended to employees of the Wilmington Board of Public Education. The Levy Court of Kent County may now elect to come under the act (ch. 118). Chapter 253 makes certain that the act excludes farm laborers, domestic servants, and elected State and certain municipal officers. A supplemental act (ch. 254) extends compensation to highway policemen.

Georgia

THE workmen's compensation act of Georgia was amended by Act No. 404. Employers are now required to make reports of the number of employees, hours of labor, and days of operation. Authorization is granted to the industrial commission to make investigations as to the insolvency of insurance carriers, and the adequacy and reasonableness of their rates, etc.

Massachusetts

THREE amendatory acts were passed. By chapter 242 the employee is permitted to engage a physician to testify in his behalf where a medical question is in dispute and the industrial accident department, seven days prior to the hearing, has failed to appoint one. A settlement by the insurer with a third party may be made only with the approval of the accident board; and where an action is discontinued against a third person 30 days' notice must now be given for a claim of compensation (ch. 326). Chapter 246 gives to the injured employee an opportunity for a rehearing as to his incapacity under certain conditions.

Nebraska

THE 1929 Legislature of Nebraska passed two acts (chs. 81 and 135) amending the compensation law of the State. Chapter 81 provides that parties dissatisfied with the award of the commissioner may appeal to the district court of the county in which the accident occurred, and upon written stipulation of the parties in the case the matter may be submitted to the district court of any county. On an appeal to the supreme court the case is heard de novo. Only in cases where the accident occurs outside the State may an appeal now be prosecuted to the district court of any county having jurisdiction of a civil action between the parties; formerly this provision applied to any case. Notice of appeal of an award must be made within 14 days, instead of 7 as formerly. For a modification of an award by the district court an application must be made to that court.

Chapter 135 provides for the bringing of suit against a third party by the employee or his personal representative, and making the employer a party to the suit for the purpose of reimbursement in case he has already paid compensation.

Ohio

Two acts were passed by the 1929 legislative session of Ohio. The occupational-disease law was amended by adding manganese dioxide and radium poisoning and two diseases peculiar to miners (p. 257,

Acts of 1929). The second act (p 262, Acts of 1929) authorizes the industrial commission to designate referees in the conduct of hearings and provides penalties for fraud.

Pennsylvania

SEVERAL amendments were added by the 1929 Pennsylvania Legislature. Appeals from the court of common pleas may hereafter be taken only to the superior court (Act No. 173). Employees temporarily working outside the State are now covered by the act (Act No. 372).

By Act No. 361 the following is provided:

State employees while engaged in official capacity outside the State are now covered; upon the remarriage of a widow, the amount of compensation paid may continue for one-third of the remaining period without the maximum time limit; in death cases the board is authorized to designate some other person to whom compensation may be paid in the event there is no guardian of the children; and for failure to secure payment of compensation new and additional penalties are provided. Provision is also made for the reimbursement of an employer out of the State fund in case an employee has waived claim under the act and sued for damages (Act No. 358). Act No. 311 merely provides that State fund premiums may be available for certain purposes.

Porto Rico

THE only legislation was Act No. 40, setting forth the functions of the industrial commission, certain salary increases, and insurance provisions.

Next Meeting of International Association of Industrial Accident Boards and Commissions

THE next meeting of the International Association of Industrial Accident Boards and Commissions will be held at Wilmington, Del., September 22–26, 1930.

Social Insurance in the Netherlands [2]

ONE of the most advanced social insurance systems in Europe is in operation in the Netherlands. Certain features of the system—the fact that it is based upon an attempt at exact calculation of contributions, benefits, and expenses, its practically universal application, and its flexibility—command the attention of the outside observers.

The present article is confined to the laws relating to invalidity, old-age, and accident insurance. Only passing reference is made to

[2] This review is based upon the following sources: A report on employers' liability legislation in Netherlands, prepared by Mr. George Tait, U. S. vice consul at Rotterdam, the Netherlands, Aug. 4, 1929; Verslag Omtrent den Staat der Rijskverzekeringsbank en 1927, The Hague, 1929; Invaliditeitswet van den 5-den Juni, 1913; Ongevallenwet van den 2-den Januar, 1901; Landen Tuinbouw-Ongevallenwet van den 20 sten Mei, 1922; International Labor Office, Studies and Reports, series M, Nos. 1 and 2, 1925, pp. 56–58 and 639–644.

the sickness insurance act which comes into effect on March 1, 1930, the text of which is not yet available.

The act of June 5, 1913, provided for compulsory old-age and invalidity insurance for all wage earners over 14 years of age who are not in active military service and whose annual earnings do not exceed 1,200 florins [3] ($482.40). Owing partly to the European war, the act was not put into actual operation to any great extent until the end of 1919. It has been changed in certain particulars by a number of amendments.[4]

Insurance against industrial accidents was established by the act of January 2, 1901. This act has also been amended a number of times.[5]

The agricultural accident insurance act is an extension of the industrial insurance acts, especially that of 1921, to wage earners engaged in agriculture. It is based upon the law of May 20, 1922, as amended by the acts of March 21, 1924, June 29, 1925, May 13, 1927, and July 2, 1928.

Invalidity and Old-Age Insurance

THE INVALIDITY and old-age insurance system covers all wage earners, with the following exceptions: Those more than 35 years old at the time of original employment, those whose earnings exceed 3,000 florins ($1,206), public employees entitled to Government pensions, and employees of a company which itself maintains a benefit fund under conditions prescribed by law.

Employer and employee are held equally responsible in seeing that the latter is insured, and failure to comply with the law subjects both to prosecution involving a fine or imprisonment. In case of an employer's residence abroad, the local manager or representative charged with the direction of the company is considered the employer.

Every citizen is required to apply for insurance to the proper Government labor board within 14 days from the time of being hired. If it appears that the applicant is not more than 35 years of age at the time of application and earns a wage of not to exceed 3,000 florins per annum, he or she is accepted for insurance.

Contributions.—The entire contributions are made by the employer. This is done by affixing each week Government insurance stamps of the required value to the insurance card of the insured. These stamps may be obtained from any local post office or labor board. When the card is filled the amount of contributions thus far made is carried over and entered in the insurance book which is retained by the insured wage earner. A new card is then issued to the insured.

Up to July 31, 1929, the weekly contributions were based upon yearly wages and made according to the following scale:

	Yearly wage	Contribution
Class I	Less than $96.48	$0. 10
Class II	$96.48 to $160.80	. 12
Class III	$160.80 to $241.20	. 16
Class IV	$241.20 to $361.80	. 20
Class V	$361.80 and over	. 24

[3] Florin at par = 40.2 cents.

[4] Acts of Mar. 21, 1919; Nov. 1, 1919; Dec. 4, 1920; Dec. 24, 1921; Apr. 21, 1922; Aug. 30, 1923; June 23, 1923; June 29, 1925; and July 30, 1926.

[5] Acts of Feb. 3, 1902; Jan. 13, 1908; Feb. 13, 1909; June 12, 1909; June 30, 1909; July 1, 1909; July 15, 1910; Feb. 11, 1911; Jan. 14, 1918; July 26, 1918; Apr. 11, 1919; Oct. 9, 1920; May 2, 1921; Apr. 21, 1922; May 19, 1922; Mar. 17, 1923; Mar. 11, 1925; June 29, 1925; May 12, 1928; July 2, 1928; and Dec. 29, 1928.

According to the new scale which came into effect on August 1, 1929, and which is based upon age and sex of the insured wage earners, the weekly contributions are as follows:

	Males	Females
From 14 to 17 years	$0. 16	$0. 16
From 18 to 20 years	. 20	. 16
From 21 years and over	. 24	. 20

If the labor board is of the opinion that an insured person who does not receive invalidity benefit will become permanently disabled and this can be prevented by proper medical treatment or nursing, the board is authorized to recommend to the State Insurance Bank (*Rijksverzekeringsbank*) that the insured be provided with medical or surgical treatment or to admit him into a hospital or institution at the expense of the bank.

Benefits.—Benefits are payable, after 150 weekly contributions have been made in behalf of the insured, for permanent invalidity or for temporary invalidity which has lasted continuously for a period of six months. A wage earner is considered to be an "invalid" when on account of injury, disease, or defects he is unable to earn a living as under normal circumstances may reasonably be expected of a person of equal abilities, education, etc.

Upon attaining the age of 65 the insured is entitled to old-age benefit.

The law provides that both in case of invalidity and old age the amount of benefit to be paid shall be determined by the following formula: Two hundred and sixty times the total amount of contributions made, divided by the number of weeks during which the insurance has been in effect. The resulting amount is then increased by 11.2 per cent of the total amount of contributions made, with a minimum of one-fifth of the result of the formula. In making this calculation the weeks during which invalidity benefits have been paid and the contributions made during these weeks are not taken into account.

In case of death of the insured provision is made for the payment of benefit to the widow or to orphan children if the mother also is dead.

A widow is entitled to benefit (1) if her husband was receiving invalidity or old-age benefit, or (2) if at least 40 contributions have been made on his behalf, or (3) if the widow is an invalid without prospect of regaining her normal health, or (4) if she has attained the age of 60 years. No benefit will, however, be paid if the marriage took place after the husband had reached his sixty-fifth birthday or after he had begun to receive invalidity benefit. The benefit payable to the widow is fixed at a sum equal to one-fifth more than the amount to which the deceased would have been entitled under the formula above quoted in the case of invalidity or old-age benefit.

Legitimate children or recognized illigitimate children less than 14 years of age are entitled to benefit upon the death of their insured parent (father, or mother if the sole means of support) when such children are left orphans, provided the parent was receiving invalidity benefit or at least 40 contributions had been made on his (or her) behalf at the time of death. In the event of the death of both parents under circumstances which would in either case have entitled

the surviving children to benefit, only the larger of the two benefits is payable. The children's benefit is the amount resulting from the formula above explained plus an additional 20 per cent thereof.

Accident Insurance

THE ACCIDENT insurance act of May 2, 1921, established compulsory insurance against industrial accidents for all wage earners (with certain specified exceptions), regardless of occupation, and failure to comply with the law subjects both employer and employee to prosecution usually involving imprisonment, but with the possible alternative of a fine. The following employees are specifically exempted from the provisions of the act: (1) Persons engaged in agriculture, livestock raising, horticulture, and forestry;[6] (2) seamen employed on seagoing vessels carrying passengers and/or cargo to foreign countries; and (3) persons employed on fishing vessels operating outside of Dutch territorial waters.[7]

Within 14 days after the establishment of any business the employer must file in duplicate at the nearest post office a report giving certain particulars, including notice of the commencement of the business. In case a business is discontinued, notice thereof must also be given within 14 days of the termination of business.

Contributions.—The amount of the contribution is variable and can not be definitely stated in advance. Since the Government insurance bank does not operate for profit, the amounts required for the payment of accident compensation, administration expenses, etc., are determined according to a fixed yearly budget based upon estimate of needs for the coming year. The cost is borne entirely by the employer. The budget is revised annually after the preparation of the annual balance sheet.

The State insurance bank may authorize self-insurance or the transfer of the risk to a private insurance company, but require the furnishing of bond to insure the faithful observance of the law. In these cases no contributions are made by either the employer or the insurance company to the State insurance bank, but the carrier of the risk must contribute to the administrative expenses of the bank and also pay to it any accident compensations for payment to the insured.

In case the insurance is carried with the State insurance bank, the scale of contributions is based upon the hazard of the occupation and the actual earnings of the insured. The employer is required to report promptly any changes in wages and to submit his wage lists regularly to the insurance bank. No contribution is chargeable on that part of wages which exceeds 8 florins ($3.22) per day. In the case of persons under 21 years of age the amount of the salary on which contribution is charged is arrived at by multiplying the daily wage by the number of days on which work has been performed by the worker. For this purpose 1.50 florins (60 cents) is set as a minimum. Thus, on a wage of 1 florin (40 cents) the employer would

[6] Such employees are, however, protected by the agricultural accident insurance act discussed later in this article.

[7] Wage earners mentioned under (2) and (3) are covered by the sea accident act, which is separately administered and over which the Government labor boards and the Government insurance bank have no jurisdiction. The insurance against sea accidents is not covered in the present review.

be assessed a contribution based upon a daily wage of 1.50 florins (60 cents). An employer is not allowed to deduct the contribution from the wages of his workers.

In case of accident the employer must provide medical assistance as soon as necessary, and within 24 hours after medical attention has been given must make a report of the accident in duplicate and deposit it at the post office.

On receipt of a notice of an accident the insurance bank establishes if necessary the following facts: (1) The cause and nature of the accident; (2) the exact name and address of the injured person; (3) a description of his injuries; (4) the amount of his wages; and (5) in case of death the names and addresses of his relatives who are entitled to benefit.

All benefits are determined by the insurance bank as soon as possible after the investigation of the case or at the end of 43 days, during which temporary benefits are paid. The insured is notified by letter of the amount of benefit, which is payable at the post office nearest to his place of residence.

An employer who has complied with the requirements of the law, which include the posting of a bond, may be authorized to have his employees treated by a medical service maintained in connection with his business. The head of this service must be a physician. In such cases no notice need be given of cases which involve temporary benefits, but entries thereof must be made in a register prescribed by law. Such temporary benefits are paid by the employer, who may be authorized by the insurance bank to pay a lower contribution subject to Government approval.

Occupational diseases are placed on a par with accidents.

Benefits.—A person injured in an industrial accident is entitled to medical and surgical treatment and any necessary artificial appliances in addition to benefits. Benefits begin on the day following the date of accident and are payable if on the third day after the accident the insured is unable, in the opinion of the medical department of the insurance bank, to perform his regular work.

Benefits are paid for temporary disability, not exceeding 43 days, at the rate of 70 per cent of the daily wage. Thereafter, for partial disability, the benefit is fixed in accordance with the degree of disablement. For permanent total disability the benefit is 70 per cent of the daily wage. Payments are calculated on the basis of a daily wage of not to exceed 8 florins ($3.22).

In case of death resulting from an accident, the benefits include (1) funeral expenses equal to thirty times the daily wage of the insured if the funeral expenses are borne by the relatives who are entitled to benefit, or the actual cost of the funeral not exceeding thirty times the daily wage if the funeral expenses are borne by persons other than relatives entitled to benefit; and (2) survivors' benefits, as follows: (*a*) To the wife, 30 per cent of her husband's wages, payable until her death or remarriage; (*b*) to the husband, if the wife was his means of support, the amount she contributed to his maintenance but not more than 30 per cent of her daily wage; (*c*) to each legal child or stepchild, 15 per cent, and if the child is or becomes an orphan, 20 per cent of the daily wage until the seventeenth birthday; (*d*) to each illegitimate child if recognized by the

insured, 15 per cent, or if an orphan, 20 per cent of the daily wage until the seventeenth birthday; (*e*) to the parents, or if there are none, to the grandparents of the deceased, when the latter was their breadwinner, the amount the deceased contributed to their maintenance not exceeding 30 per cent of the daily wage, payable until an agreed date or until the death of the last surviving parent; (*f*) to each orphaned grandchild of the deceased, if the latter stood in loco parentis, the amount which the deceased contributed to their maintenance, but not more than 20 per cent of the daily wage until their seventeenth birthday; (*g*) to the parents-in-law of the deceased, if the latter was their means of support, the amount of contribution to their maintenance, but not more than 30 per cent of the daily wage, payable until an agreed date or until the death of the last survivor. The total amount of benefits payable to the survivors may not exceed 60 per cent of the wage of the deceased, and no one of the groups mentioned may receive compensation until the claims of the preceding groups have been satisfied.

In certain cases the benefits may be commuted to a lump sum equal to three times the annual benefit.

Benefits are not payable for accidents willfully caused by the insured, and in case of an accident due to drunkenness the temporary payment is reduced by 50 per cent. No benefits are payable in case of death from an accident willfully caused or caused by drunkenness.

When the insured is a member of the crew of a vessel not covered by the seamen's accident act and suffers a total loss of his personal effects on account of shipwreck compensation equal to 40 days' wages is paid to him.

Agricultural Accident Insurance

THE PROVISIONS of the agricultural accident insurance act are in large part identical with those of the industrial accident insurance act, varying only in the following particulars:

The agricultural accident insurance act is restricted to wage earners employed in agriculture, cattle breeding, horticulture, and forestry. The classification to which a given business belongs is determined by the State insurance bank and the labor boards.

The risk may be transferred only to a company formally approved by the Government. An association of employers, duly incorporated, may assume the risk, provided it complies with certain requirements, including a statement of its aims, the furnishing of bond, the keeping of a register of members, etc. The employer who is a member of such an association pays his premium to the association, which is in turn responsible therefor to the State insurance bank. In case of accident the question of benefit is determined and the award is made by the association. These associations are under the control and supervision of a board of inspectors, consisting of a president and 9, 12, or 15 members appointed by the Government, one-third of whom are members of employers' organizations, one-third of the trade-unions, and one-third are Government officials.

Sickness Insurance

THE SICKNESS insurance act of 1913 was substantially amended by a new act enacted on June 24, 1929, providing compulsory insurance against sickness for practically all workers whose yearly wage is less than 3,000 florins ($1,206).

As the act comes into effect only on March 1, 1930, the amount of the contribution, which is to be made by the insured and his employer in equal shares, is not definitely fixed as yet. It is proposed, however, to fix it at 2 per cent of the wage of the insured.

The amount of sick benefit is set at 80 per cent of wages, and becomes payable on the third day following that on which the sickness began. The maximum period of payment is six months; no payment is made for Sundays.

Unemployment Insurance

UNEMPLOYMENT insurance is based upon a system of Government subsidies to the unemployment funds of the labor unions. These subsidies, which are fixed by law at 100 per cent of the contributions made by the members of the unions, have as a rule considerably exceeded this proportion during periods of excessive unemployment, especially in winter.

Administration and Actual Working of the Social Insurance System

THE SUPERVISION and enforcement of social insurance laws are vested in the State labor boards (*Raden van Arbeid*) and in the State insurance bank (*Rijksverzekeringsbank*). In cases where the insurance is carried directly by the insurance bank all receipts from contributions and disbursements for benefits are handled by the bank itself.

The local superintendence and execution of the accident insurance act is vested in inspectors, engineers, agents, medical advisers, and controllers of the State insurance bank established at Amsterdam and in the State labor boards.

It is claimed that the social insurance laws are successfully enforced. The only attempts at evasion come from persons employing only a few workers and from private persons employing domestic servants. Such cases are prosecuted.

The insurance system causes a certain amount of additional labor and expenses for the employers, especially for those employing large personnel. For instance, shipyards or factories employing 2,000 or more workers usually find it necessary to employ on their staff two additional clerks to handle the insurance cards, wage lists, etc. The amount of work in this connection has, however, recently been reduced somewhat by authorizing the employers to affix the insurance stamps once a month instead of every week.

LABOR LAWS AND COURT DECISIONS

Statute Prohibiting Coercion of Employees in Trading not Intended for Protection of Merchant

A KENTUCKY statute (sec. 2738–s 1) made it unlawful for any person to coerce or require an employee to purchase merchandise "from any person, association, corporation, or company or at any place or store whatever," and made it unlawful for an employer "to exclude from work or to punish or blacklist any of said employees for failure to deal with any other or to purchase any article of food, clothing, or merchandise whatever from any other or at any place or store whatever."

On September 1, 1927, the Fordson Coal Co., of Pike County, Ky., posted a notice stating that as a matter of convenience to the employees it would thereafter issue scrip up to an amount not exceeding 70 per cent of the employee's earnings. The notice also stated that "any employee passing scrip to an outsider, so that it will require the company to redeem the same, will be discharged."

Anderson Hackney at the time was operating a general store in the vicinity of the company's mine and enjoyed a large and profitable trade from the employees of the company. Hackney brought an action against the coal company, averring that as a result of the posting of the notice he suffered a loss in trade, since the employees drew scrip and were afraid of being discharged if they used their scrip in dealing with any store other than those maintained by the company. The Circuit Court of Pike County, in which the action was brought, dismissed the petition, and from that judgment Hackney appealed to the Court of Appeals of Kentucky. This court affirmed the judgment of the lower court and held that the statute "was passed for the benefit of employees, to the end that they should not be coerced into trading at the commissary of their employer, where they might be subject to extortion and all manner of unfair dealing. The section was never intended to protect those merchants who were in competition with the employer for the trade of his employees. Therefore, although an employee of the appellee may have a right of action for the violation of this statute, if it has been violated, a point we need not determine, yet, as the appellant was not an employee, or one for whose benefit the statute was passed, he has no cause of action for its violation." (Hackney *v.* Fordson Coal Co., Court of Appeals of Kentucky, June 21, 1929, 19 S. W. (2d) p. 989.)

Award of Compensation on Uncorroborated Statement of Deceased Employee

A BILL in equity was brought in the District Court of Maine, Southern Division, by the Pocahontas Fuel Co., to set aside an award made by the deputy commissioner of the first district, under the United States longshoremen's and harbor workers' compensation act.

From a statement of facts it appeared that—

> The deceased employee was at work in the hold of the ship on the morning of the accident, cleaning down coal from the beams or stringers overhead. A fellow workman testified that the last he saw of the deceased he was picking up lumps of coal and throwing them at the lumps on the beams to knock them down. No one saw the accident. Presently the deceased was seen on the wharf holding his hand to his head, evidently requiring assistance, and made the statement, upon inquiry, that he had been struck on the head by a lump of coal. There was a cut on his head; and on the way to the hospital, where he was taken immediately, he made a further detailed statement to the same effect.

The coal company contended that the Federal longshoremen's and harbor workers' act did not apply, and hence that the deputy commissioner was without jurisdiction, since there was no evidence that the employee's death resulted from an injury occurring upon the navigable waters of the United States. In order that the Federal act may apply it must be shown that death resulted from an injury incurred upon navigable waters, and that recovery through workmen's compensation can not validly be had under State law. At the time the injured employee was discovered he had walked from the vessel onto the wharf. On the way to the hospital he stated how the accident happened. According to the Federal act, declarations of a deceased employee concerning the injury may be received in evidence, and if corroborated be sufficient to establish the fact of the injury, the district court saying that "evidence establishing the fact of injury would necessarily establish the place where the injury occurred." The court, continuing, stated that although the statement of the deceased employee was not corroborated, yet there was "ample justification from all the evidence and the circumstances for the conclusion that the accident occurred on the ship, and therefore that the longshoremen's compensation act applies. This being the case, it is apparent that no conclusions of the deputy commissioner can be disturbed as not being in accordance with the law, because they have evidence to support them."

Since the deputy commissioner is given wide authority, and his findings are conclusive, if there is any evidence to support them, the court concluded that it was not authorized to interfere unless it appeared that the proceedings were not according to law. The bill prayed for by the company was therefore dismissed. (Pocahontas Fuel Co. (Inc.) et al. *v.* Monahan, deputy commissioner et al., District Court, District of Maine, S. D., August 3, 1929, 34 Fed. (2d), p. 549.)

Collective Bargaining Case Appealed to Supreme Court for Final Determination

A CASE which has created widespread interest on the subject of the right of railroad employees to bargain collectively has been appealed to the Supreme Court of the United States by the Texas & New Orleans Railroad Co.[1] The case originally arose in the District Court for the Southern District of Texas in August, 1927. A judgment was rendered in favor of the Brotherhood of Railway and Steamship Clerks, and upon appeal to the United States Circuit Court of Appeals, Fifth Circuit, by the railroad company, the decree of the district court was affirmed.

The main points of contention raised by the railroad company and upon which the appeal is based are (1) that the provisions of section 2 of the railroad labor act are beyond the power of Congress to enact, and (2) that the issuance of the injunction was a violation of section 20 of the Clayton Act since there was no property right involved.

[1] Texas & New Orleans Railroad Co. *v.* Brotherhood of Railway and Steamship Clerks, etc., 24 Fed. (2d) 426; and 33 Fed. (2d) 13. (For an account of the early stages of this case see Labor Review, June, 1928, pp. 96–98, and October, 1929, pp. 78–80.

COOPERATION

Labor Banking Movement in the United States

A BOOK has recently been published by the industrial relations section of Princeton University which describes the rise of the labor banking movement and its development and presents an evaluation of its accomplishments in the light of its avowed aims and purposes.[1] An interesting feature of the book is an appendix giving for each bank an account of the circumstances of promotion and organization, its ownership and control, cooperative features, special services, personnel, and character of business.

The report is the result of four years' study of the movement.

Reason for the Establishment of Labor Banks

THE main reasons which led labor organizations to start labor banks are given by the report, as follows: (1) Business reasons—the profitable investment of surplus trade-union funds, or the acquisition of promoters' profits. The author of the study gives it as his opinion that it was the first of these reasons which prompted the establishment of the first two banks (the machinists' and the first engineers' bank) and that it was only after the success of the early banks had been demonstrated that other banks were established, primarily with the aim to secure the promoters' profits. The author states that "probably no one cause was more instrumental in creating the labor banking movement than the accumulation of large funds by strong labor unions."

(2) Protection of the labor movement. The depression of 1921 and the open-shop drive gave impelling reasons for the establishment of means of defense. The open-shop campaign especially "served to arouse the rank and file of labor to an interest in the possibilities of banking enterprises. Suspicion of the tactics of bankers favoring the open shop was widespread and proved a powerful factor in securing support for proposals for labor banks." Labor felt that its own money was being used against it by the bankers.

(3) Advancement of the labor movement by using the great potential financial power of the laboring class to favor fair employers, to assist workers unemployed because of strikes, lockouts, or lay-offs, in opening cooperative workshops, etc.

(4) Cooperative service to workers through higher interest rates on their money, dividends to depositors, small loans to wage earners, aid in investments, aid to cooperative societies, and, in general, assistance in promoting cooperation in all ways possible.

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[1] Princeton University. Department of Economics and Social Institutions. Industrial Relations Section. The Labor Banking Movement in the United States. Princeton, N. J., Princeton University Press, 1929.

(5) Psychological reasons, such as the desire to add to the prestige of the union, the personal ambition of the officers, and the emulation of other unions already in the banking field. The success of early banks "gained support for the promotion of a labor bank where purposes such as trade-union strategy or service to workers would have left union members cold."

Growth of Labor Banking

ALTHOUGH as early as 1904 the establishment of workers' banks was proposed in conventions of the American Federation of Labor and the subject was also considered by two unions not affiliated with the American Federation of Labor—the Brotherhood of Locomotive Engineers and the Amalgamated Clothing Workers of America—the first labor bank did not appear until 1920.

Labor leaders and organizations had been more or less interested in cooperative stores, in the years during and following the war, because of the necessity of finding some defense against the mounting cost of living. The idea of labor banks, however, had received little serious consideration. The meeting of the All-American Farmer-Labor Cooperative Congress in 1920 and the appointment of a permanent committee served to arouse some interest.

On May 15, 1920, the Mount Vernon Savings Bank was opened in Washington, D. C., sponsored by officers of the International Association of Machinists. Only a bare majority of stock was owned by the union and officers together.

The first real impetus to the labor banking movement was given by the opening of the Brotherhood of Locomotive Engineers Cooperative National Bank in Cleveland. Fifty-one per cent of the stock was owned by the Brotherhood and the remainder was sold to its members. This bank was immediately successful and during its first four years had a phenomenal growth. From December 29, 1920, to June 30, 1924, deposits rose from $1,009,880 to $26,016,688.

As its success became known, other national organizations and local labor groups began to establish banks. Among the other national organizations which established their own labor banks were the Amalgamated Clothing Workers of America, Brotherhood of Railway Clerks, International Printing Pressmen and Assistants' Union (bought controlling interest in bank already established), Order of Railroad Telegraphers, American Flint Glass Workers' Union, and International Ladies' Garment Workers' Union. In addition many banks were established in which stock was owned by local unions of various trades. Also, a bank was started by the New York Federation of Labor. At the same time the Brotherhoood of Locomotive Engineers began to launch its financial system, which was later to become practically a coast-to-coast organization. A diagram given in the report shows that at one time the Brotherhood owned or controlled 14 banks, a holding company, an investment company, 6 securities corporations, a realty company, a mortgage company, an insurance agency, and several "thrift" companies, besides owning an interest in a Wall Street bank and in another in Florida. The whole was built up in an interlocking structure.

The period from 1920 to 1926 was one of almost continuous expansion of labor banks, as the following table shows. From that time the movement has receded. A staggering blow was dealt by the revelations at the 1927 convention of the Brotherhood of Locomotive Engineers of the precarious condition of its whole financial structure.

DEVELOPMENT OF LABOR BANKS, 1920 TO 1929

Date	Number of banks	Capital	Surplus and undivided profits	Deposits	Total resources
June 30—					
1920	1	$160,000	$49,695	$697,243	$899,471
1921	3	1,220,000	193,087	6,345,863	9,936,461
1922	7	1,640,000	504,011	15,801,434	19,879,800
1923	14	3,214,890	1,055,788	32,930,541	39,253,339
1924	25	5,968,963	1,941,039	60,594,612	71,887,652
1925	29	7,593,070	2,649,148	85,143,783	100,159,713
1926	36	9,316,600	3,782,210	108,899,264	126,356,944
1927	33	8,555,000	3,807,481	108,548,389	125,640,521
1928	28	7,437,500	3,606,915	98,183,830	114,748,059
June 29, 1929	22	6,687,500	3,807,579	92,077,098	108,539,894

Attitude toward Labor Banks

THE report states that "the degree of enthusiasm within sponsoring unions or labor groups at the time of initiation of various labor banks varied widely." In some cases enthusiasm was general; in others support was more or less lukewarm. It often proved difficult to secure as depositors the members whose accounts were already in some other bank. Some of the reasons for this were inconvenience of location of the new bank, doubt as to the ability of the officers, advice by bankers or business men against the transfer of their funds, etc. Unions have, as a whole, given the bank better support, according to the report, than have the individual members.

Above all, "nothing has been more insidious in its unfavorable influence on the relation of labor banks with the rank and file of sponsoring unions than union politics." Personal or political antagonisms, difficulties over jobs or concessions at the bank and over loans to members have been a part of this.

"Anxiety lest the divided attentions of the officers, between bank and union, result in harm to the latter has reduced the enthusiasm for labor banking in some instances."

Not all institutions suffered from lack of support or from opposition. "All banks have met with some phases of member opposition but the balance has been on the side of loyalty and support in a number of cases," as in the Amalgamated banks, the Federation Bank in New York, and the Hammond (Ind.) bank. In the author's opinion, however, "the majority of labor banks have had poor support from the labor group from which loyalty was most expected. Inertia, indifference, and pronounced caution best describe the attitude of the rank and file of interested unions toward many banks." In some instances it has even been true that "unorganized workers have supported the local labor bank better than many trade-union groups."

In general the attitude of the American Federation of Labor has been one of "cautious interest." The more radical groups both

within and without the labor movement have condemned this venture in finance by trade-unions as "class collaboration."

With some exceptions, the history of relations between labor banks and other banks in their community "is one of indifference, bitterness, or active opposition."

Policies and Problems

ONE of the greatest single problems of the labor bank has been that of personnel, and some of the worst mistakes have been in this connection. Usually the men chosen as executive officers had had some banking experience, but in approximately half of these this experience had either been limited or unsuccessful. "Probably no fact in the history of labor banking is more discouraging than this record of faulty selection of key men." In some cases an initial mistake of this kind was later remedied, but in others there was a succession of ill-chosen executives.

On the other hand the more successful banks have been fortunate in securing men of pronounced ability. The men so obtained have varied widely in their appreciation of the movement as a social experiment. "A small minority have coupled cautious and capable administration with an inspiration that labor banking has a real place despite the difficulties and failures it has faced. Whether trained in the labor movement or not—and more often the latter is true—it is upon the social mindedness and perseverance of such men that the future of labor banking depends."

Labor leaders have not made the place of the labor bank executive an easy one. Not only have the responsibilities often exceeded those indicated by the title given the incumbent, but in many cases they have exceeded the authority permitted. The executive has sometimes found himself responsible to depositors, borrowers, examiners, and superior officers, with a board of directors as suspicious and partisan as untrained. Caution, especially as to personal loans, has been regarded as parsimony, and cooperation with other banks as disloyalty. Directors have failed to support the executive in getting new accounts, and yet have become much aroused at expenditures for advertising. Refusal of concessions to friends has been made a personal question. An inferiority complex on the part of directors has required the executive to nurse along his board when his energies should have been devoted to banking problems. While such experiences have not been universal, they have been frequent.

The president has in most instances been a labor official or prominent citizen rather than a trained banker. The cashier, however, has generally been an experienced banker, usually the executive officer already discussed. Vice presidents have ordinarily been prominent trade-unionists, as have also been the majority of the board of directors. The author remarks that "in general * * * the directorates of labor banks have been a very serious weakness," and the board "taken as a whole, has been a hindrance rather than a help." It is of interest in this connection that this fact is being more and more recognized by the most successful labor banks and the tendency is to replace strictly labor men with experienced bankers and business men.

Other problems have been the difficulty of securing deposits from a sufficiently varied group; the acceptance of an unduly large number of poor accounts, in the attempt to obtain business; and losses from character loans because of the expense incurred in collections, law-

yers' fees, and time consumed by officers in unprofitable interviews. A difficulty in connection with loans has been pressure from individual unionists who have been prone to regard the obtaining of a loan as a matter of right. One instance is told in which the disappointed applicants for loans carried the matter into union meetings and secured advocates "in the manner of ward politicians seeking appropriations."

In the matter of small loans, however, the author thinks labor banks have made "an important contribution in pioneering this new field in city banking."

Commercial loans to fair employers have been very few and not always successful in outcome.

Success of the Movement

From the Banking Standpoint

As measured by return on investment, only moderate success is shown. In 1921 the dividends of the labor banks averaged 4.4 per cent. The average return rose to 6.18 per cent in 1922 then fell to 3.22 in 1923 and to 1.76 in 1924. Since then the rate has risen slightly but not until 1928, when every bank had been in existence at least two years, did it exceed 3 per cent. If losses were taken into account the return would be even less. If only the banks still in existence are included the rate of return is slightly higher.

Three banks are so large that their combined resources or deposits are as great as those of all the other labor banks together. These are the Federation Bank of New York, the Engineers' Bank of Cleveland, and the Amalgamated Bank of New York. The first is supported by all the American Federation of Labor unions in New York, and has also wide contacts outside of labor circles. "Its aim seems to be that of developing a successful bank to the end that labor will thereby gain prestige." The Engineers' Bank has been part of the Brotherhood system, though not so closely connected with it since 1927. In the opinion of the report, both these banks have been means to other ends. "The elements of class cooperation and class consciousness which made labor banking a unique movement in its early days have largely disappeared in these institutions. There are now more banks controlled by labor organizations than labor banks, if such a distinction is possible." The Amalgamated bank, the author thinks, will become the outstanding labor bank because it has continued to be a unit in the program of a labor organization acting in its own capacity; it has not lost the "spirit of a class-conscious enterprise permeated with a purpose of advancing class cooperation"; and its banking policies have been both cautious and progressive.

Other successful banks cited are the Telegraphers' bank in St. Louis, the Paterson (N. J.) bank, the Railway Clerks' bank at Cincinnati, the Mount Vernon Bank at Washington, D. C., the Hammond (Ind.) bank, the Chicago Amalgamated bank and the Newark (N. J.) bank.

In the banks which have failed outright, or have been sold or liquidated while on the verge of failure, the causes of nonsuccess have been unsound banking as exemplified by ignorance, inefficiency,

dishonesty, poor judgment, favoritism, speculation, questionable financing, etc.

In certain cases banks otherwise sound were forced to close because of runs due to banking conditions in general rather than those of the bank concerned.

Another group was transferred to nonlabor interests after more or less unsuccessful careers under labor control. In general, the author thinks, "the degree of success attained varied inversely to the extent labor directors and officers filled positions which should have been occupied by business men and trained bankers."

From the Labor Standpoint

The report states that from the financial point of view trade-unions "have had no reason to be satisfied" with the returns on their funds invested in labor banks, except in a few cases, and concludes that "in only the most successful institutions can further use of trade-union funds be warranted."

The extent to which the banks have attained the purpose of protecting labor's interests is difficult to determine because of the fact that the mere existence of a labor bank in the community is a threat to those who would attack labor. But the report does not think this threat is very effective, because of the small size of most labor banks and their decreasing number.

> Altogether, the labor banking movement has done as much to expose "Labor" to the assaults of "Capital" as to protect it. The engineers, through Stone and his successors, did more to injure the labor movement than any other trade-union has ever done. The fight with the United Mine Workers over the Coal River Collieries is but one instance. The impairment of the confidence of the rank and file in the sincerity of trade-union leaders was far more serious.

More can be said of the success of the labor banks in promoting the cooperative movement. The banks of the Amalgamated Clothing Workers are especially cited in this connection.

Most of the banks, at least at the time they were started, had certain cooperative features, and many included the word "cooperative" in their name.[2] The number of shares that could be held by any one stockholder was limited in 18 of the 39 banks started. Others (29 in number) adopted the policy of limiting the rate of dividends to stockholders and of sharing profits above this limited rate with savings depositors.

In practice most of these cooperative features were of little effect. Many banks found it difficult enough to sell their stock, without having the additional handicap of limitation of shares allowed per purchaser. As to limitation of dividends to stockholders, many banks never paid any dividends at all and very few at a rate approaching 10 per cent, which was the usual limitation. Only three ever paid dividends to depositors and of these only the Hammond bank continued to do so through 1928.

Since 1925 and 1926 the trend of labor banks has been away from cooperative principles and toward "regular banking." Usually this has taken place through the desire to safeguard the bank, but any contribution to the labor movement through the development of cooperative endeavor has thus been eliminated.

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[2] The report points out, however, that none adopted the principle of one man one vote.

Jewish Cooperation in Palestine

A RECENT study [3] describes the various activities being carried on cooperatively by the Jews in Palestine. According to the author, "the cooperative principle has been introduced into every aspect of life." In fact, the Jews, he states, form societies almost too readily. "There are many societies for cooperative credit, for agricultural settlement, for the production and marketing of dairy produce, wine, oranges, and tobacco, for consumers and industrial producers of all kinds, for the opera and theatrical workers, for urban settlements, actual or imaginary, and for every kind of trade and profession except possibly the lawyers' and doctors', and even for such homely callings as hairdressers and bootblacks."

It is emphasized that in studying the cooperative movement of Palestine it is necessary to bear in mind that it is "cooperation in the making, of a country in the making," for there are many features which do not square up with the generally accepted principles of cooperation. The author is inclined to think that some of these deviations may be the result of the necessities arising from the colonization program.

Development of the Movement

THE FOLLOWING statement shows the number of registered societies of each type and of these the number known to have been in operation on August 31, 1928:

	All registered societies	Number actually in operation
Agricultural societies	41	37
Wholesales	2	1
Credit societies	42	40
Federations	3	3
Industrial producers' societies	25	9
Land purchasing and building societies	80	51
Miscellaneous	6	5
Total	199	146

In addition to these there were 62 unregistered organizations, of which 42 were industrial producers' societies, 17 were dairies, and 3 were cattle-insurance societies. Thus there are in operation 208 cooperative societies.

It is estimated that the membership of the cooperative societies in Palestine exceeds 35,000. These societies serve the needs of 90 communities having a total Jewish population of 141,142. Thus, on the average, one of every five Jews is a member of a cooperative society.

[3] Viteles, Harry: The Jewish Cooperative Movement in Palestine. (Bulletin of the Palestine Economic Society, Tel Aviv, June, 1929.)

Reasons for Growth of Cooperation

SEVERAL reasons are advanced for the rapid spread of the cooperative movement in Palestine since the beginning of the world Zionist movement there. One is that in the early colonization period, joint action assures greater and more rapid success than individual efforts. Another is the support, moral and financial, given by the labor movement there. A third is the physical characteristics of the country, which present obstacles which no individual can remove by himself.

Types of Societies and Characteristics of the Movement

UNTIL after the World War, the credit society was the most significant, if not practically the only, form of Jewish cooperation. These societies have generally operated without capital stock, the usual practice being that when a member applies for a loan 10 per cent of its amount is retained by the society as his contribution to it and is kept as part of the funds of the society until two years after his withdrawal. Payment of interest on this enforced contribution is exceedingly uncommon. These societies are remarkable for the large proportion of borrowing members and for the large number of nonmember depositors. However, "bankruptcy of a Jewish credit union is practically unknown."

Efforts to develop a consumers' cooperative movement have not as yet been very fruitful. In this connection the author states:

> It is not difficult to understand the absence of a Jewish consumers' cooperative movement in consequence of the predominance of traders among the Jews in eastern Europe. The Jews can not be expected to encourage and become very enthusiastic about the creation of weapons for their economic destruction. Whether life in Palestine—where it is hoped to diminish the rôle of the Jewish trader—will be favorable for the propagation of the consumers' cooperative principles, it is yet too early to state. A fundamental prerequisite is a permanently located and employed proletariat and clerical class. There is also the question of whether the present Jewish psychology and mentality can fully appreciate the advantages of consumers' cooperation which requires an appreciation of future savings in the form of dividends on purchases rather than immediate savings by being able to purchase commodities at lower prices or on credit. The Jews—thus resembling the Irish—like to patronize and trade with the neighborhood store, the owner of which may be a distant relative, a friend, or may have come from the same village from which he emigrated.

Neither have the workers' productive societies been very successful, and of the fifty-odd societies of this type operating at the end of 1928, "there are not more than six * * * which seem to have weathered the period of infancy and appear to have good chances of thriving."

Some of the unusual characteristics of the cooperative movement in Palestine are the following: (1) In many instances much of the capital on which the society operates has been contributed by persons outside the country, who hold what is called "preference shares." This practice is justified by some on the ground that "the potential population of Palestine is really all of Jewry. * * * This help is needed because Palestine is a new country which is being developed for all the Jews, and not only for Jews residing here at the present time. The present population is unable to carry the entire financial

burden of developing the cooperative movement." Another argument is that such assistance merely corresponds to the help given by some governments to the cooperative movement of their country. One result, however, has been to weaken to some extent the feeling of financial responsibility by the active members of the society.

(2) Sometimes the majority of members, and even of the incorporators, are absentee members. This is likely to be true in the cooperative land-purchasing and building societies where the cooperative group is organized abroad and several of the members are sent ahead to Palestine to look over the land and take the preliminary steps toward the formation of the society. Considerable amounts of capital have been brought into the country in this way, but, on the other hand, development of the project is not always carried through and this results in land being left idle and in some cases being held for speculation.

(3) The same individual may be a member of several credit societies at the same time and may also be a borrower from each. "Most of the leaders of the cooperative credit movement in Palestine contend that it is both impossible and undesirable to limit the membership of an individual to one cooperative credit society. Every possibility and facility must be afforded to the immigrants to obtain the maximum amount of credits, since this is a direct method of helping in their establishment." As in the past this method has not caused any society to fail, they feel that probably it will not in the future. There is, however, an excessive amount of delinquencies in the repayment of loans. In seven urban credit unions nearly 24 per cent of the debtors were delinquent.

(4) In some of the building societies the members pay in specified amounts regularly, and the name of the next member to be aided in the building of a dwelling is drawn by lot when the society has accumulated from the deposits £300 ($1,460). The fortunate person receives this amount as a mortgage loan. The author states:

> There has developed a small stock market for the purchase of the "rights of the winners." According to the rules of the building clubs, the winner in a drawing, with the approval of the committee of management, may transfer his right to another member. The records show that this permission was granted in practically all instances where it was sought. The winner then sells his right to the highest bidder, receiving as much as £50–£75 [$243–$365] for the transfer of the right to a £300 loan.

(5) There has been a tendency to create the central cooperative organizations first, and to have the latter organize the local associations. This was done in the consumers' movement, the wholesale society being formed before there were any local societies. "It is only now that the establishment of local consumers' stores is under consideration."

(6) The General Jewish Federation of Labor has had a strong interest in the cooperative movement, but has restricted membership in the societies fostered by it to members of the federation, on the ground that the trade-union and cooperative movements are "the two sides of one coin." The author remarks that "there is no fault to find with the efforts to safeguard union-labor standards within cooperative societies, but there is a question as to the desirability of the very close relationship and almost complete dependency of cooperative societies upon the General Jewish Federation of Labor."

Notes on Cooperative Developments

COOPERATIVE theatricals.—A musical comedy was written and presented by employees of the Cooperative Central Exchange, Superior, Wis., at the recent annual meeting of that organization. The play contained many songs, with words dealing with cooperative or labor subjects, adapted to the music of current popular tunes. The play itself dealt with the winning of a strike through the aid of a cooperative store organized by the strikers.

Conferences on cooperative trade in Great Britain.—During October, 1929, the managers and officials of consumers' cooperative societies in Great Britain held a series of conferences to consider the business policy of the societies, according to a report, dated October 2, 1929, from Albert Halstead, American consul general at London. At one of these conferences the establishment of a research department was urged, to examine the business methods of the competitors of the movement and to investigate new methods with a view to their adoption by the movement. Another suggestion was the immediate reduction of the cooperative societies to not more than 500, this to be accomplished by amalgamations of local societies.

It was pointed out that, making allowances for the reduced purchasing power of the pound, the average sales per member have declined 20 per cent since the first year of the war (1914). This has been the case especially in the grocery departments, which have always been regarded, so the report says, as "the backbone of the societies." The adviser of studies of the Cooperative Union is of the opinion that the societies should reduce prices rather than raise dividends.

A park for cooperators.—In a Marquette district of Michigan an association has been formed whose purpose is the operation of a park and recreation ground for members of cooperative societies. A tract of land has been bought with frontage on Shag Lake, a lake about a mile in length, located about 2½ miles from Princeton, Mich. Some of the land has been cleared for picnic grounds, and a small kitchen and a dressing room have been built. Only cooperative societies are eligible for membership in the Marquette District Park Association.

It is pointed out that the grounds are available not only in the summer for picnics, boating, swimming, etc., but also in the winter for skating "if we care to step on our skiis for a bracing two miles and a half." [4]

Activities of cooperative employees.—The employees of the Cooperative Trading Co., at Waukegan, Ill., have appointed a committee to promote activities tending "to develop and foster the spirit of collective action" among them. These workers already have a bowling league of four teams representing, respectively, the dairy, grocery, bakery, and meat departments, according to the Central States Cooperator for October, 1929. The committee is planning to organize an orchestra and glee club and perhaps a study circle.

A new type of cooperative service.—The Cooperative Central Exchange at Superior, Wis., announces the establishment of a new service for its member stores. One of its experienced employees has been

[4] Cooperative Pyramid Builder (Superior, Wis.), October, 1929.

selected to act as technical adviser to the stores. According to the announcement, the need for such a service is pressing. "Throughout the group of stores affiliated with the Cooperative Central Exchange the standards of efficiency and modernization must be raised considerably if the cooperatives are to maintain a basis for further expansion, successful competition with private business, and economic benefit to their members. Old and antiquated methods, indifference to or ignorance of even the most elementary requirements in management, stock control and arrangement, sanitation, merchandise display, and a host of other vital problems, all represent enormous waste not to be tolerated by a healthy cooperative movement."

The adviser will visit each store of the organization, making a study of it and of local conditions, giving special attention to such points as the type of community, the nationalities, and the industries therein; the location of the store with regard to the membership, the transient trade, the business center, industry, etc.; the condition of the grounds and store and other buildings, and the facilities provided; the store equipment and its arrangement in relation to attractiveness and efficiency; the delivery equipment; the cleanliness and general appearance of the store; and the merchandise handled, and its suitability and the inventory. Recommendations, based upon experience, will be made on each point.

Combination of activities in the cooperative store.—The Trenary Farmers' Cooperative Store, at Trenary, Mich., not only acts as a consumers' organization, but during 1928 the board of directors conceived the idea of starting a cooperative cheese factory. The idea being approved by the membership, the factory was built and commenced operations in August of that year. According to the report,[4] the enterprise "received immediate support from the farmers" of the locality.

> Milk was received in sufficient quantities from the start, assuring the success of the venture. Satisfactory markets were also secured for the products of the factory so that it was able to operate efficiently throughout the fall months. The volume of milk fell off somewhat during the winter, but again rose above the previous receipts during the summer months to about 10,000 pounds per day. The milk producers have been generally satisfied with the prices they have received, while the cooperatively produced cheese has found ready acceptance on the part of the consumers. The Cooperative Central Exchange also handles this product, while it is generally in demand at cooperative and other gatherings.

The store has benefited by the new interest and its sales have increased appreciably since the cheese factory was started.

[4] Cooperative Pyramid Builder (Superior, Wis.), October, 1929.

LABOR CONGRESSES

Convention of American Federation of Labor, 1929

THE sessions of the forty-ninth convention of the American Federation of Labor were held at Toronto, Canada, October 7 to 18, 1929.[1] According to the secretary's report to the delegates, the federation includes 4 departments, 105 national and international unions, 677 local department councils, 803 city central bodies, 388 local trade and Federal labor unions, and 28,865 local unions. The average paid-up and reported individual membership for the fiscal year ending August 31, 1929, was 2,933,545,[2] an increase of 37,482 over that of the preceding year.

For the year ending August 31, 1929, the total funds (balance, income, and other receipts) aggregated $909,742.44 and the total expenditures $575,181.87, leaving a balance of $334,560.57, of which $278,678.64 was in the defense fund for local and Federal labor unions.

Executive Council's Report

A SUMMARY of the disbursements in the benefit services of standard national and international unions for 1928 is given below from the report of the executive council to the 1929 convention:

Sick benefits	$2, 377, 746. 38
Death benefits	16, 623, 585. 93
Unemployment benefits	665, 279. 88
Old-age pensions	4, 712, 731. 29
Disability benefits	3, 285, 578. 46
Miscellaneous benefits	5, 149, 052. 60

Among other important matters discussed in this document are: Industrial progress, wage earners' progress, progress in Canada, organizing methods and organization progress, international organization, national legislation, educational work, employment and unemployment, and discrimination against older workers. From the discussion of the last-mentioned subject the accompanying paragraphs are taken.

Data sent this office from various sources make it clearly apparent that there is a widespread discrimination against older workers in practically all industries and trades. It exists in the United States Government and in our State, county, and municipal governments. Outside of these governmental fields the practice is strongest where the trades and industries are poorly organized or where the control of such industries is in the hands of large corporations.

A number of causes to which the practice has been attributed are: Old-age pensions, workmen's compensation risks and group insurance, pace of industry set by machine, difficulty in retaining older workers. In some places discrimina-

[1] American Federation of Labor. Report of proceedings of the forty-ninth annual convention (advance copy), Toronto, Canada, 1929; report of the executive council to the forty-ninth annual conevntion, Toronto, Canada, Oct. 7, 1929; and Weekly News Service, Washington, Nov. 2, 1929.

[2] It is estimated that there were at least 500,000 members for whom per capita tax was not paid up because of strikes and unemployment.

tion exists to the extent that young unmarried foreign labor is preferred to married domestic labor, and laborers with small families are preferred to those with large families. These latter regulations are charged to the inequalities existing in some of our State workmen's compensation laws.

But very few of the bureaus devoted to the interests of labor and industry have spent any considerable effort upon this growing tendency in industry. As a result of the inquiry made by the American Federation of Labor a few departments of labor initiated inquiries. Several of our State departments of labor, or the appropriate division thereof, have stated that no discrimination is practiced in their States toward older workers. Others state that while rumors are abroad to the effect that discrimination exists, nothing of a definite nature has been brought to their attention. Others, however, are clearly of the opinion that such discrimination does exist and in many instances have cited illustrations of it.

During the year under review the American Federation of Labor participated in the work of the following organizations: Committee on recent economic changes; White House conference on child health and protection; committee conference on census of unemployed; committee conference on census of distribution and manufactures; board of traumatic surgery of the American College of Surgeons; National Educational Commission; and National Conference on Street and Highway Safety.

The supplementary report of the executive council dealt with "the closer integration" of the Workers' Education Bureau of America with the American Federation of Labor and the supporting national and international unions. Two of the bureau's activities received special mention—the assignment of a field worker to Elizabethton, Tenn., to start a workers' education program in cooperation with the Tennessee Federation of Labor and the United Textile Workers of America, and the preparation for a labor congress in New England.

Resolutions and Decisions

THE FOLLOWING is a résumé of the action of the convention on various important matters:

Government employment.—The executive council was instructed to cooperate to secure a genuine advance in pay for civil-service employees and the extension of the shorter Saturday workday principle in Government employment as a step toward the establishment of the 5-day week in such service; to assist representative organizations of Government employees to bring about the setting up of a court of appeals for them and to help in securing the prompt passage of more satisfactory retirement legislation. Employment of citizens on Government work was indorsed and it was recommended that the American Federation of Labor continue its efforts for the enactment of additional legislation making mandatory the construction and manufacture of all instruments of war in existing Government establishments. The position of the Federation favoring higher employment standards in Government employment was reaffirmed.

Organization.—Recommendation was made for additional efforts to organize workers in the automobile industry; authorization was given for raising funds by the federation's executive officers for an organization campaign in the South and instructions were given that a conference of the officers of all national and international unions be called to devise a policy acceptable to all parties interested in the

campaign. The declaration of the Scranton convention favoring craft autonomy was reaffirmed as a substitute for a resolution proposing the merging of international unions with a view to eliminating jurisdictional disputes.

Reduction of unemployment.—Recommendation was made that the promotion of Federal and State employment agencies be made one of the main projects of the federation in 1930 and that efforts be made to stimulate the study of labor displacement. In this latter connection it was urged that conferences among the various groups concerned in this problem be called with a view to averting hardships. Continued investigation of the discrimination against older workers was specifically emphasized and the declaration was made that the development of automatic machinery and scientific processes with consequent reduced employment opportunities "makes it imperative that the 5-day work week be universally installed."

Immigration.—The convention went on record in favor of restriction of Filipino immigration; of further restriction of immigration from the Eastern Hemisphere; and of immigration from all countries below the Rio Grande and adjacent islands being placed on a 2 per cent quota based on the 1890 census.

Leisure.—A Sunday-closing law for the District of Columbia barber shops was favored; the hope was expressed for progress in vacations with pay; and the abolition of overtime work and the extension of opportunities for outdoor recreation were urged. The convention also unanimously adopted that part of the report of the executive council which reads as follows:

> In urging more leisure for the workers we reject the inference, sometimes made, that they should be directed in the "proper use" of such leisure. This is another phase of the age-long concept that workers should be guided and controlled. Experience sustains our claim that wage workers use their leisure as advantageously as any other group, and that their intellectual capacity is developed as a result of that leisure.

Educational matters.—Recommendation was made that the school-leaving age be raised in all States not yet having reached the highest achieved standard in this regard; that the committee on education investigate to what extent the history of the labor movement and the movement for women's industrial and political equality are included in American history texts; and for independent study and cooperation with other educational and social organizations studying textbook problems with reference to propaganda and the favoring and elision of texts. The convention urged the energetic continuation of the program and activities to secure labor representation on boards of education, library boards, and commissions on textbooks and on vocational education commissions; and the continuation and development of the federation's own research work on the plan already inaugurated. Increase in the personnel of the Workers' Education Commission was recommended; and satisfaction was expressed at the action of the executive committee of the Workers' Education Bureau of America in authorizing the enlargement of correspondence instruction service. The proposal for a national labor college for workers' education was referred to the executive council of the American Federation of Labor.

Provision for old age.—Recommendation was made for the enactment of State old-age pension laws which would provide for a pension

commission in every county and at least $300 per annum for beneficiaries, the age of applicants to be set at 65.

International relations.—Recommendation was made that the executive council continue its efforts to establish plans looking toward perfect understanding and collaboration with the International Federation of Trade Unions. The delegates of the American Federation of Labor to the 1930 Pan American Labor Convention were instructed to "favor permanent cooperation with the International Federation of Trade Unions on a basis of hemispheric equality." It was decided not to take action on the proposal that the executive council take up with the President and other Government representatives the question of having unofficial observers from the United States Government at the International Labor Office, and the proposal for the affiliation of the American Federation of Labor with the International Labor Office was not adopted.

Miscellaneous.—Indorsement was given to the efforts of labor's broadcasting station, WCFL, to obtain unlimited use of a radio-frequency with adequate time and power. Opposition was expressed to legislation for military and industrial conscription in so-called national emergencies. The federation's disapproval of the so-called equal rights amendment was reaffirmed and the executive council was instructed to continue its energetic opposition to the passage of such amendment. It was recommended that a close study be made of the operations of the farm relief act in order to ascertain whether the principles of this legislation might be effectually applied to the coal industry and other industries deserving of similar governmental consideration.

Officers Reelected

WILLIAM GREEN was reelected president and Frank Morrison and Martin F. Ryan will again serve, respectively, as secretary and treasurer. Boston was voted the next convention city.

LABOR TURNOVER

Labor Turnover in American Factories

THE Bureau of Labor Statistics presents its October preliminary labor turnover index for American factories. The factories now reporting to the bureau have approximately 700,000 employees on their pay rolls. In the table monthly figures are given back to January, 1928.

The bureau is gradually expanding the volume of its reports from the different industries. Special effort is being directed at this time to expanding the number of reporting firms manufacturing automobiles, cotton goods, and boots and shoes, in order that separate index numbers may be published for these industries. As soon as the industries specified are sufficiently expanded similar action will be taken in other industries.

AVERAGE LABOR TURNOVER RATES IN SELECTED AMERICAN FACTORIES [1]

[The rate is per 100 employees on the pay roll. The monthly rate is the rate for the calendar month. The equivalent annual rate is the rate for the month expressed as an annual rate]

A.—Monthly Rates

Month	Separation rates								Accession rate		Net turnover rate	
	Quit		Lay-off		Discharge		Total [2]					
	1928	1929	1928	1929	1928	1929	1928	1929	1928	1929	1928	1929
January	1.3	2.3	0.7	0.4	0.3	0.4	2.4	3.1	2.8	5.0	2.4	3.1
February	1.2	2.4	.6	.4	.4	.5	2.1	3.2	2.4	4.4	2.1	3.2
March	1.7	3.1	.7	.5	.4	.6	2.8	4.2	3.0	5.2	2.8	4.2
April	2.1	3.6	.6	.5	.4	.6	3.1	4.6	3.3	5.8	3.1	4.6
May	2.4	3.5	.7	.5	.4	.5	3.5	4.4	4.0	5.1	3.5	4.4
June	2.2	3.2	.6	.4	.4	.5	3.2	4.2	3.4	5.0	3.2	4.2
July	2.3	3.0	.5	.4	.4	.5	3.2	3.9	4.0	5.2	3.2	3.9
August	2.7	3.4	.4	.4	.4	.4	3.6	4.1	4.7	4.6	3.6	4.1
September	3.3	3.1	.4	.5	.4	.5	4.2	4.1	4.7	4.9	4.2	4.1
October	2.7	[3] 2.4	.4	[3] .8	.4	[3] .4	3.6	[3] 3.6	4.8	[3] 3.8	3.6	[3] 3.6
November	2.1	-------	.4	-------	.4	-------	2.9	-------	4.1	-------	2.9	-------
December	1.7	-------	.4	-------	.4	-------	2.5	-------	3.2	-------	2.5	-------
Average	**2.1**	-------	**.5**	-------	**.4**	-------	**3.1**	-------	**3.7**	-------	**3.1**	-------

B.—Equivalent Annual Rates

January	15.7	26.7	8.5	4.2	3.6	5.3	27.8	36.2	33.4	58.6	27.8	36.2
February	15.1	31.0	7.9	4.7	4.6	6.0	27.6	41.7	31.6	56.9	27.6	41.7
March	20.1	36.8	8.4	5.7	4.3	6.7	32.8	49.2	35.9	61.2	32.8	49.2
April	26.0	43.3	7.1	5.5	5.1	6.9	38.2	55.7	40.0	70.2	38.2	55.7
May	28.2	40.8	8.3	5.7	5.0	5.6	41.5	52.1	47.2	59.9	41.5	52.1
June	27.1	39.5	7.5	5.4	4.9	6.2	39.5	51.1	41.3	60.9	39.5	51.1
July	27.2	35.7	5.9	5.0	4.9	5.8	38.0	46.5	46.9	61.4	38.0	46.5
August	31.9	38.4	5.1	4.8	5.3	5.3	42.3	48.5	55.7	54.3	42.3	48.5
September	40.3	38.2	5.0	6.3	5.3	6.1	50.6	50.6	56.9	59.7	50.6	50.6
October	31.9	[3] 28.0	4.7	[3] 9.2	5.3	[3] 4.7	41.9	[3] 41.9	57.1	[3] 44.7	41.9	[3] 41.9
November	25.6	-------	4.8	-------	4.9	-------	35.3	-------	50.1	-------	35.3	-------
December	20.1	-------	4.7	-------	4.4	-------	29.2	-------	38.1	-------	29.2	-------
Average	**25.8**	-------	**6.5**	-------	**4.8**	-------	**37.1**	-------	**44.5**	-------	**37.1**	-------

[1] Now numbering over 400, with nearly 700,000 employees. The form of average used is the unweighted median of company rates.

[2] Arithmetic sum of quit, lay-off, and discharge rates.

[3] Preliminary, subject to revision.

There was a decided falling off in the quit rate in October as compared with September and, conversely, a decided rise in the lay-off rate. The accession rate declined 8.7 points. Comparing October, 1929, with October, 1928, there was a slight decline in both the quit rate and the discharge rate, but a decided increase in the lay-off rate. There was also a pronounced decline in the accession rate in October, 1929, as compared with the same month last year. The net turnover rate was the same in October each year, 41.9.

When the Bureau of Labor Statistics took over the collection and publication of labor turnover rates from the Metropolitan Life Insurance Co. it was with the understanding that the last named was to continue until the end of 1929 its series of turnover talks as sent out to the establishments that had been cooperating with the company. The November Turnover Talks, issued by the company, bears so directly on the method of procedure that it is here reproduced with a few minor abridgments.

A STANDARD PROCEDURE

To further the development of accurate labor turnover statistics—national, local, and industrial—it is essential to consider how each company compiles its monthly reports and particularly how each defines such terms as "quits," "discharges," "lay-offs," and "average number on pay roll." * * *

Experience has clearly shown that the wisest course is to obtain agreement on the items to be classified under each term. Take "discharges," for example. A "discharge" is a termination initiated by an employer for such reasons as:

Incompetence.
Misfit (physically or mentally).
Violation of rules.
Dishonesty.
Insubordination.
Trouble breeding.
Laziness.

A "lay-off" is a termination initiated by an employer because no work is available. Its specific causes are:

Lack of orders.
Lack of material.
Breakdown.
Reorganization.
Release of temporary help.

In general, among companies which keep monthly records of labor turnover, there is little disagreement as to the meaning of "discharges" and "lay-offs." Certain companies, however, classify as "lay-offs" instead of "discharges" those terminations which have been initiated by the employer because the employees are "misfits." We believe such a practice unwise for the purpose of this study. A "lay-off" should indicate lack of work, and thus an index of "lay-offs" will reflect unemployment. Indexes of "quits" and "lay-offs" vary inversely, and because of this fact they constitute valuable barometers of prosperity and depression. Coupled with a rising "quit" rate, a falling "lay-off" rate is an indication of prosperity, while a rising "lay-off" rate with a falling "quit" rate will indicate the reverse condition.

A "quit" is a termination initiated by an employee. It may result from dissatisfaction regarding:

Wages.
Hours.
Working conditions.
Labor policies.

Or it may be due to other reasons such as:

Finding a better job.
Returning to school.
Marriage.
Sickness.
Reasons unknown to the employer.

In addition, there are certain miscellaneous causes of termination, perhaps not to be logically classified as "quits." Their number is few and for the sake of simplicity they are included on the monthly reports under the general heading "quits and miscellaneous separations." Such items include terminations because of:

Death.
Permanent disability.
Superannuation.
Transfer to another plant of the same company. (Interdepartment transfers are not included.)

In some companies the question arises as to whether or not certain classes of employees should be included in the turnover record, as for example:

Office employees.
Temporary help.
Part-time workers.
Employees in training prior to assignment to a department.
Department heads and foremen.
Doctor, nurse, safety engineer, time-study man, etc.

Our past practice has been to exclude all "office employees" * * * (whenever possible).

"Temporary help," "part-time workers," and "employees in training" have been included in the National Turnover Indexes. It is sometimes contended that the release of temporary help is a saving because their continuance would be costly, and therefore that "temporary help" should not be considered as labor turnover. On the other hand, such a practice would discourage constructive efforts toward the regularization of industry. It is difficult to consider the release of "temporary help" as costly without presupposing instability of employment as a necessary evil. In so far as these statistics focus the attention of management on the problem of instability, they are helpful. Secondly, regardless of savings in cost, the loss of "temporary help" affects the demand and supply of labor just as much as the loss of other employees. Consequently, if turnover indexes are to reflect economic conditions, such employees should be included. Lastly, turnover indexes should simply present the facts. The interpretation of those facts is left to each company.

Department heads, foremen, doctors, time-study men, etc., are as a matter of practice more often included than excluded in turnover statistics. It is our impression that their number is relatively so small that this matter can be left to the judgment of the company.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in October, 1929

DATA regarding industrial disputes in the United States for October, 1929, with comparable data for preceding months, are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 is a summary table showing for each of the months—January, 1927, to October, 1929, inclusive—the number of disputes which began in those months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1927, TO OCTOBER, 1929

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
1927					
January	37	18	5,915	2,287	58,125
February	65	45	9,756	5,717	115,229
March	74	67	13,142	8,182	214,283
April	87	88	202,406	199,701	5,265,420
May	107	116	22,245	200,702	5,136,006
June	80	88	18,957	196,323	4,863,345
July	65	63	33,994	199,287	5,308,123
August	57	53	8,150	198,444	4,999,751
September	57	58	12,282	196,829	4,945,702
October	50	58	13,024	82,095	2,724,117
November	27	51	5,282	82,607	2,040,140
December	28	54	4,281	81,229	2,129,153
1928					
January	48	63	18,850	81,880	2,128,028
February	52	58	33,441	103,496	2,145,342
March	41	47	7,459	76,069	2,291,337
April	71	48	143,700	129,708	4,806,232
May	80	56	15,640	133,546	3,455,499
June	44	46	31,381	143,137	3,670,878
July	54	42	18,012	132,187	3,337,386
August	59	42	8,887	105,760	3,553,750
September	52	34	8,897	62,862	2,571,982
October	61	42	27,866	41,474	1,304,913
November	44	38	37,840	38,745	1,300,362
December	23	29	5,172	35,842	991,238
1929					
January	45	34	14,727	39,484	949,692
February	48	34	20,134	40,385	921,583
March	77	42	14,052	41,321	1,094,161
April	103	52	30,130	52,292	1,429,046
May	98	73	26,220	58,959	1,578,929
June	69	71	19,702	54,584	1,526,627
July	74	75	35,900	21,872	1,116,557
August	68	55	25,138	8,123	380,681
September	86	61	18,103	8,056	245,327
October	61	68	16,369	9,366	289,684

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in August, September, and October, 1929, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN AUGUST, SEPTEMBER, AND OCTOBER, 1929

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	August	September	October	August	September	October
Auto, carriage, and wagon workers	1			600		
Bakers		1			600	
Broom and brush workers	1			170		
Building trades	13	14	4	1,252	1,737	138
Car builders	1			1,500		
Chauffeurs and teamsters	4	4	12	584	278	6,318
Clothing	16	27	11	3,884	10,390	1,060
Electrical and gas supply workers	1	1		300	500	
Food workers	1			79		
Furniture	2	6	2	298	156	650
Leather	2	2		111	95	
Longshoremen and freight handlers	1			225		
Metal trades	5	8	4	345	3,136	335
Miners	10	1	11	14,741	176	3,711
Motion-picture operators, actors, and theatrical employees	3	11		40	251	
Oil and chemical employees		1	1		12	100
Printing and publishing		1			53	
Railway workers			1			75
Rubber		1			14	
Stationary engineers and firemen	1	1		120	26	
Municipal workers			1			1,800
Teachers			1			140
Textiles	3	5	11	696	618	1,217
Other occupations	3	2	2	193	61	825
Total	68	86	61	25,138	18,103	16,369

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in October, 1929, classified by number of workers and by industries:

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN OCTOBER, 1929, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in October, 1929, involving—				
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers
Building trades	2	2			
Chauffeurs and teamsters	2	4	4		2
Clothing	3	4	4		
Furniture			1	1	
Metal trades	2		2		
Miners	2	3	4		2
Oil and chemical workers			1		
Railway workers		1			
Municipal workers					1
Teachers			1		
Textiles	2	4	5		
Other occupations		1		1	
Total	13	19	22	2	5

In Table 4 are shown the number of industrial disputes ending in October, 1929, by industries and classified duration:

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN OCTOBER, 1929, BY INDUSTRIES AND BY CLASSIFIED DURATION

Industry	Classified duration of strikes ending in October, 1929					
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	3 months and less than 5 months	6 months and less than 10 months
Building trades	3	2				
Chauffeurs and teamsters	5	1		1		
Clothing	6		3	2	2	1
Furniture	1					
Leather			1			
Metal trades	1	1	1			1
Miners	6	1				
Motion-picture operators, actors, and theatrical employees			2			
Municipal workers	1					
Teachers	1					
Textiles	8			1		1
Other occupations	1					
Total	33	5	7	4	2	3

Principal Strikes and Lockouts Beginning in October, 1929

Truck drivers, fruit and produce, New York City.—A 3-day strike of 2,000 truck drivers, members of Local No. 202 of the International Brotherhood of Teamsters, Chauffeurs, Stablemen, and Helpers of America, began October 5 and ended October 8. The strike followed several days of unsuccessful negotiations with the Market Truckmen's Association (the "boss" or master teamsters) the drivers demanding an 8-hour day and time and a half for overtime. The truck drivers transport the city's supply of fruit and vegetables from railroad terminals, etc., and so great was the congestion on account of the strike that an embargo against such shipments to New York City was announced by six railroads entering that city.

The settlement of the strike, according to press reports, provides for a general wage increase of $5 a week and the retention of the 9-hour day, with $1 per hour for overtime, as formerly. Under the new schedule the drivers' wages will range from $45 to $53.50 per week, not including overtime.

On October 8 the embargo on shipments was raised by the railroads.

The agreement followed a settlement of differences between the Market Truckmen's Association and the receivers, commission merchants, and brokers, represented by the Fruit and Produce Trade Association and the Fresh Fruit and Vegetable Association, whereby certain radical changes in the handling of fruit and produce were agreed upon. This agreement between the Market Truckmen's Association and fruit and produce receivers and wholesale perishable dealers, especially section 9 of the agreement, met with such strong opposition in various quarters, particularly from the near-by farming communities of New Jersey and New York, that the objectionable section was suspended until October 16, at the request of the com-

missioner of the State Department of Agriculture and Markets and of the chairman of the governor's agriculture advisory committee. The section referred to reads as follows: "All merchandise, carted by trucks and not carted from common carriers, including railroad terminals and yards or steamship terminals, shall be delivered to receivers at the locality on West Street, New York City, commonly termed 'the farm,' with the understanding that delivery thereof will not be accepted prior to 8 p. m. nor later than 5 a. m. No sales to be permitted on 'the farm.'" Under this arrangement a truck hauling produce to New York City from New Jersey, for instance, would be required to deliver its load to an association truck at "the farm" for delivery to the commission merchant, thereby entailing additional handling and haulage with an extra expense to the shipper, ranging, it is alleged, up to 7 cents a "package."

After several conferences with reference to the objectionable section, it was reported on October 23 that this section had been indefinitely suspended because of the opposition of the farmers and independent truckers.

Truck drivers, oil, New York City.—A strike involving approximately 3,000 truck drivers employed in the delivery of oil and gasoline began on October 5 when some drivers for the Pratt branch of the Standard Oil Co. of New York, in Brooklyn, went out, demanding higher wages and shorter hours. The strike assumed large proportions on the morning of October 9, when about 3,000 drivers went to their places of work wearing conspicuously on their caps the emblem button of the fuel and gas drivers' Local No. 553 of the International Brotherhood of Teamsters, Chauffeurs, Stablemen, and Helpers. They refused to go to work until their demands for pay increase and an 8-hour day were granted.

About a dozen of the larger oil companies were involved, including, according to press reports, the Standard Oil Co. of New York, Tide Water Oil Sales Corporation, Warner-Quinlan Co., Sun Oil Co., Gulf Refining Co., Sinclair Refining Co., Paragon Oil Co., Beacon Oil Co., The Texas Corporation, etc.

According to one spokesman for the union, the strike was precipitated by the flat refusal of the Standard Oil Co. to take back three union members who had been discharged from the Brooklyn plant "for union agitation."

The companies refused to negotiate with the strikers or to recognize the union, and the strike failed. By October 19 most of the men, it is said, had returned to work and the strike was practically over.

Truck drivers, wholesale grocers, New York City.—Demanding a wage increase of approximately $10 per week, an 8-hour day, and time and a half for overtime, a strike of approximately 350 drivers, called by Grocery Truck Drivers' Local No. 282 of the International Brotherhood of Teamsters, Chauffeurs, Stablemen, and Helpers of America, began on October 9 and continued until October 22. This strike, according to press reports, involved five wholesale grocers, namely, Austin-Nichols Co., Francis Leggett & Co., Seeman Bros., R. C. Williams, and the Sunglo-Sills Co.

The settlement, it is understood, was in the nature of a compromise, a wage increase of $5 per week being allowed.

Municipal employees, Chicago.—Organized street cleaners, garbage collectors, etc., numbering 1,800, employed by the bureau of streets of the Chicago department of public works, struck on October 21 because of lack of steady work, due to the insufficient funds of the department. Steady work five days a week for 1,550 men was agreed to and work was resumed on October 24.

Textile workers, North Carolina.—A strike of 250 employees at the cotton mill of the Marion Manufacturing Co. at Marion on the morning of October 2 was accompanied by disorders, in which two men were killed outright and about a score of others injured, four of whom afterwards died.

According to press reports, officials of the United Textile Workers of America, who called the strike, contend that mill officials had failed to carry out the terms of the agreement by which a recent strike at the mill was settled.

It is understood that the mill had a full complement of workers by October 15, the strike having been unsuccessful.

Principal Strikes and Lockouts Continuing Into October, 1929

Street-car workers, Louisiana.—On October 17, according to press reports, the company announced an end of all negotiations with the union, saying:

> Convinced that it has done everything possible from the beginning to avert and to settle the strike, the company now proposes to go forward and operate its cars for the service of the public with the loyal men who have remained faithful to their work and those who have been or may be permanently employed.

The car men voted on October 31 to accept unqualifiedly the tentative strike settlement of September 5, heretofore alluded to. It appears that the strike has been unsuccessful.

Shoe workers, Massachusetts.—The strike or strikes in Boston and Chelsea which began April 8, concerning which it has been difficult to obtain reliable or definite information, ended, it now appears, by July 13, without the workers gaining any concessions.

Conciliation Work of the Department of Labor in October, 1929

By Hugh L. Kerwin, Director of Conciliation

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 48 labor disputes during October, 1929. These disputes affected a known total of 22,911 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On November 1, 1929, there were 68 strikes before the department for settlement and in addition 15 controversies which had not reached the strike stage. The total number of cases pending was 83.

LABOR DISPUTES REPORTED DURING THE MONTH OF OCTOBER, 1929

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers	
					Beginning	Ending	Directly	Indirectly
					1929	1929		
Sharon Foundry Co., Wheatland, Pa.	Strike	Molders	Wages for overtime; conference refused.	Unable to adjust. Refused to transact business with union.	Sept. 26	Oct. 23	33	
Veterans' Hospital building, American Lake, Wash.	Threatened strike.	Building crafts	Contractor employed nonunion labor.	Pending	Oct. 1		25	
Gerrity Whitaker Co., Toledo, Ohio	Strike	Metal polishers	Wages cut 10 per cent	do	Sept. 27		40	43
Atlas Fence Co., New York City	do	Fence makers	Dispute relative to union labor.	Adjusted. Company signed union agreement.	Sept. 16	Sept. 26	25	
H. R. Brown & Son Coal Co., Roswell, Ohio.	do	Coal miners	Reduction in wages for both loaders and cutters.	Unable to adjust	do	Oct. 8	176	
Philadelphia Daily News, Philadelphia, Pa.	do	Drivers	Asked $2 per week increase—$30, and union recognition.	Pending	Oct. 1		52	
G. Vorzimer & Son, Philadelphia, Pa.	do	Necktie makers	Asked union recognition	Other workers employed	Sept. 3	Sept. 4	90	
Penn Athletic Club, Philadelphia, Pa.	do	Elevator operators	Dispute over working hours	Unclassified. Places filled before arrival of commissioner.	Sept. 27	Oct. 8	11	3
Building crafts, Wilmington, Del.	Controversy	Building crafts	Terms of agreement	Adjusted. Union agreement concluded.	Oct. 3	Oct. 3	80	
American Rolling Mills, Middletown, Ohio.	Strike	Steel workers	Recognition of union refused by company.	Unable to adjust	Oct. 1	Oct. 4	33	
Phil Syder Dress Co., Chicago, Ill.	do	Garment workers	Company refused to meet union representative to discuss terms of agreement.	Adjusted. Satisfactory agreement concluded.	Oct. 2	do	55	
Clothing makers, Baltimore, Md.	do	Clothing makers	Asked restoration of wage cut.	Unclassified. Granted 10 per cent increase before arrival of commissioner.	Sept. 26	do	1,200	
New Home Sewing Machine Co., Orange, Mass.	do	Employees	Announced 15 to 20 per cent wage cut for piecework.	Adjusted. Accepted 5 to 15 per cent cut.	Oct. 1	Oct. 10	175	
Ludlow Manufacturing Co., Ludlow, Mass.	do	Spinners	Increased labor without increase in pay.	Unclassified. Concessions and increase granted before arrival of commissioner.	Sept. 30	Oct. 3	142	126
Truck drivers, New York City	do	Drivers	Wages for overtime and 8-hour day.	Adjusted. Drivers granted $5 per week increase; concessions made by drivers as to loading.	Oct. 5	Oct. 8	2,000	
Pennsylvania Railroad Yards, Pittsburgh, Pa.	do	Produce handlers	Asked wage increase and shorter hours.	Pending	Oct. 1		75	
State School for Mental Diseases, Fairmount, N. Y.	do	Building	Contractor refused to employ union plumber and helper for small job.	Adjusted. Union plumber and helper employed.	Sept. 27	Oct. 9	100	50
Soronow Furniture Co., and 25 other firms, Los Angeles, Calif.	do	Upholsterers	Wages and union recognition.	Adjusted. Strike declared off; majority of firms signed union agreements.	do	Nov. 2	500	200

Glendale Colliery, Jessup, Pa.	do	Miners	Asked signed rate agreement.	Adjusted. Strike declared off during negotiations with new mining company.	Oct. 2	Oct. 14	325	10
Tugboat owners, New York Harbor.	Controversy	Tugboat workers	Asked wage increase; working conditions.	Adjusted. Increase of $10 per month to captains, engineers, mates, and pilots; $5 per month to other employees.	Oct. 1	do	5,000	
Deutsch, Arnold & Engleberg Dress Co., Chicago, Ill.	Strike	Garment makers	Asked union recognition; refused.	Pending	Oct. 4		15	3
Warden Allen Co. & Foundation Co., Milwaukee, Wis.	Controversy	Plumbers, engineers, iron and steam workers.	Warden Allen Co. refused to employ union men on job for Foundation Co.	do	Oct. 1		(1)	
Austin Nichols & Co., Francis Leggett & Co., and R. C. Williams & Co., New York and Brooklyn, N. Y.	Strike	Drivers and helpers on wholesale grocery trucks.	Asked wage increase and improved conditions.	Adjusted. $5 per week increase to drivers; $3 to helpers; $1 per hour for overtime, and 9-hour day.	Oct. 9	Oct. 23	350	3,000
Deerdon Hosiery Mills (Inc.), Philadelphia, Pa.	do	Hosiery knitters	Asked increase for footers	Adjusted. Footers received 5-cent increase: 47 cents per dozen.	Oct. 8	Oct. 19	37	36
H. Freeman & Son, clothing manufacturers, Philadelphia, Pa.	Lockout	Clothing workers	Asked recognition of Amalgamated Clothing Workers of America.	Adjusted. Signed agreement, with recognition.	Oct. 15	Oct. 23	200	
Louis Goldsmith, Inc., Philadelphia, Pa.	Strike	do	do	Unclassified. Company signed agreement; commissioner not engaged.	Oct. 24	Oct. 31	285	
United Pants & Overall Co., Philadelphia, Pa.	do	Pants and overall makers.	do	Adjusted. Recognition and 5 per cent increase.	Oct. 15	Oct. 15	80	
W. L. Fowler & Co., Cedar Rapids, Iowa.	Threatened strike.	Electrical workers	Dispute relative to employment of out-of-town electrical workers.	Adjusted. Local workers employed; others discharged.	Oct. 7	Oct. 14	1	12
Fuel and gas companies, Greater New York.	Strike	Truck drivers	Asked increase to $47.50 per week and 8-hour day.	Unclassified. Strike activities discontinued.	Oct. 5	Oct. 19	3,000	
A. G. Sanford, contractor, Coatesville, Pa.	Lockout	Bricklayers	Nonunion men employed; wage rates.	Pending	Oct. 1	Oct. 15	16	
Empire Hat Co., Chicago, Ill.	do	Millinery workers	Company objected to unionization.	do	Oct. 10		150	
Arnstein & Schoenberg, Chicago, Ill.	Strike	do	do	do	do		50	
Glendora Coal Co., Baker Mine, Sullivan, Ind.	do	Machine operators	7 men discharged for refusing to cut coal for hand loaders.	Adjusted. Reinstated at $9 per day; will cut coal for hand loaders.	Oct. 12	Oct. 24	120	150
Roman Theater, Pittston, Pa.	do	do	National union asked that union operators be employed.	Adjusted. Compromised satisfactorily.	Oct. 9	Oct. 26	2	
Koppers Construction Co., Pittsburgh, Pa. (Construction for Lehigh Valley Coal Co.)	do	Electricians	Hours and conditions	Adjusted. Strike declared off; 8-hour day allowed and workers may return when needed.	Oct. 12	Oct. 18	17	
Susquehanna Coal Co., Nanticoke, Pa.	do	Miners	Dispute relative to dual organization.	Adjusted. Workers returned to United Mine Workers of America.	Oct. 23	Oct. 26	1,300	
Public schools, Plains Township, Pa.	do	Teachers	Salaries unpaid for 5 months.	Adjusted. Directors promised to pay back salaries soon.	do	Oct. 30	140	

[1] Not reported.

LABOR DISPUTES REPORTED DURING THE MONTH OF OCTOBER, 1929—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers	
					Beginning	Ending	Directly	Indirectly
Scott Transportation Co., Erie, Pa., Buffalo, N. Y., and Cleveland, Ohio.	Lockout	Transportation workers.	Union workers discharged	Pending	Oct. 18		200	
Emboyd Theater, Fort Wayne, Ind.	Threatened strike.	Operators and stage hands.	Wages; number of musicians to be employed; vaudeville acts proposed.	Adjusted. Vaudeville acts deferred at this time.	Oct. 2	Oct. 11	7	42
Palace Theater, Fort Wayne, Ind.	do	do	do	do	Oct. 11	Oct. 26	7	42
Jefferson Theater, Fort Wayne, Ind.	do	do	do	do	do	do	7	42
Neth theaters, Columbus, Ohio	Lockout	Operators	Signing of annual contract	Pending	Oct. 23		10	
Pontusac Woolen Mills, Pittsfield, Mass.	Strike	Weavers	Price for top winding	Adjusted. Allowed 1 cent per yard increase and improved conditions.	Oct. 24	Oct. 28	100	
American Newspaper Publishers' Assn., Chicago, Ill.	Controversy	Typographical workers.	Asked increase from 63 to 73 cents per hour for day work and 68 to 78 cents for night work.	Pending	(1)		1,100	
Franklin Assn., Chicago, Ill.	do	do	Asked 5-day week and renewal of agreement.	Adjusted. Allowed $7.50 per week increase; 44-hour week until April, 1930; then 40-hour week.	June 15	Nov. 11	1,620	
Chas. Raab Co., Philadelphia, Pa.	Strike	Garment makers	Asked union working conditions.	Unclassified. Places of strikers filled; commissioner not engaged.	(1)	Nov. 8	75	75
Northwood Hosiery Co., Philadelphia, Pa.	do	Hosiery knitters	Wages cut 10 to 22 per cent	Accepted wage cut of 5 per cent	Oct. 23	Nov. 19	250	
Max Dam Co., Newark, N. J.	Controversy	Leather workers	Shop agreement and union recognition.	Pending	Oct. 30		65	45
Total							19,208	3,703

[1] Not reported.

Activities of Labor Courts in Germany, 1929

FOR the purpose of simplifying, lessening the cost, and speeding up court procedure in cases connected with employment of labor, the act of December 23, 1926, which came into effect on July 1, 1927, established a system of labor courts of the following types: (1) The local labor court (*Arbeitsgericht*); (2) the provincial labor court (*Landesarbeitsgericht*), to which cases exceeding 300 marks ($71.40) can be appealed from the local labor court; and finally, (3) the Federal labor court (*Reichsarbeitsgericht*), a special division of the German Supreme Court.

A report on the activities of these labor courts was recently published in the Vierteljahrshefte zur Statistik des Deutschen Reichs.[1]

In 1928 there were in operation 527 local and 80 provincial labor courts and the Federal labor court.

The local labor courts handled 252,833 cases of wage earners, 89,796 cases of salaried employees, and 37,060 cases of artisans, altogether 379,689 cases, of which 2,699 cases were between trade-agreement parties or between these and a third party; 359,979 cases were between workers and their employers; 16,377 cases involved dismissal of workers; 184 cases contained complaints against either employer or worker, involving a third party legally or industrially connected with one of them; and 14 cases involved legal disputes between juridical persons under the civil law having some connection with employment.

Of the 379,689 cases, 341,803 cases, or 90 per cent of the total, were ended in the local labor courts, as follows: Amicably settled by mutual agreement of the parties, 93,669 cases; settled through court action, 43,611 cases; waived according to section 306 of civil procedure, 1,202 cases; ended by acknowledgment of the parties, 8,285 cases; dropped by the parties, 73,205 cases; ended by default, 42,544 cases; settled by other court action, 62,301 cases; and terminated by other settlements, 16,986 cases. The number of cases carried from the local labor courts to the provincial labor court for reconsideration was 13,497 in 1928; 762 cases were appealed from this court to the Federal court.

The length of time required for the settlement of the cases and the amounts involved are shown in the following table:

TIME REQUIRED FOR SETTLEMENT AND AMOUNTS INVOLVED IN CASES BEFORE LOCAL AND PROVINCIAL LABOR COURTS IN 1928

Item	Local courts	Provincial courts
Time required for settlement:		
Less than 1 week	3,174	
1 week to 2 weeks	13,849	1,448
2 weeks to 1 month	24,336	
1 month to 2 months	17,276	3,289
2 to 3 months		817
3 months and over	3,666	543
Amounts involved:		
$4.76 or less	69,032	
Over $4.76 to $14.28	102,197	3,970
Over $14.28 to $23.80	64,273	
Over $23.80 to $71.40	82,879	
Over $71.40 to $952	56,878	8,870
Over $952	3,376	657

[1] Germany. Statistisches Reichsamt. Vierteljahrshefte zur Statistik des Deutschen Reichs, Zweites Heft, Berlin, 1929, pp. 112-125.

Industrial Disputes in Sweden, 1918 to 1928

THE following figures, published in the Sociala Meddelanden [2] shows the number of industrial disputes, number of employers and workers involved, and number of workdays lost through disputes during 1918 to 1928:

TABLE 1.—INDUSTRIAL DISPUTES, WORKERS INVOLVED, AND DAYS LOST, 1918 TO 1928

Year	Strikes			Lockouts			Controversies not leading to strike or lockout			Total disputes			
	Number	Workers involved	Days lost (thousands)	Number	Workers involved	Days lost (thousands)	Number	Workers involved	Days lost (thousands)	Number	Workers involved	Days lost (thousands)	Establishments involved
1918	668	50,377	1,078	10	756	18	30	10,090	340	708	61,223	1,436	2,689
1919	414	69,980	1,859	10	727	15	16	10,334	422	440	81,041	2,296	2,363
1920	455	42,657	1,928	9	37,988	3,225	22	58,394	3,790	486	139,039	8,943	2,954
1921	302	44,053	2,336	22	742	83	23	4,917	244	347	49,712	2,663	2,322
1922	354	43,547	1,713	11	287	11	27	31,845	951	392	75,679	2,675	1,260
1923	192	42,995	1,791	6	21,506	661	8	38,395	4,455	206	102,896	6,907	799
1924	238	19,495	884	11	1,545	89	12	2,936	232	261	23,976	1,205	877
1925	211	20,438	937	15	117,772	1,295	13	7,568	328	239	145,778	2,560	1,577
1926	191	28,046	1,622	4	24,116	62	11	729	27	206	52,891	1,711	504
1927	164	7,634	350	15	1,142	28	10	701	22	189	9,477	400	334
1928	174	18,132	1,009	12	48,748	3,558	16	4,658	271	202	71,538	4,838	777

As is seen from the above figures, there were 13 more disputes, 443 more employers, and 62,061 more workers involved in disputes in 1928 than in 1927.

The following table shows disputes of 1928 by causes and results:

TABLE 2.—CLASSIFICATION OF LABOR DISPUTES OF 1928, BY CAUSE AND RESULT

Cause of dispute	In favor of employer		In favor of workers		Compromised		Result unknown		Total	
	Number	Workers	Number	Workers	Number	Workers	Number	Workers	Number	Workers
Wages	15	1,784	29	1,315	75	31,670	8	163	127	34,932
Agreement	2	254	13	430	7	809	------	------	22	1,493
Employment and dismissal	8	2,644	4	340	3	133	2	23	17	3,140
Management	3	233	1	18	3	354	------	------	7	605
Sympathy	------	------	------	------	8	30,132	1	70	9	30,202
Other	2	12	7	283	10	851	1	20	20	1,166
Total	30	4,927	54	2,386	106	63,949	12	276	202	71,538

[2] Sweden. [Socialdepartementet.] Socialstyrelsen. Sociala Meddelanden, No. 9, Stockholm, 1929, pp. 685–687.

HOUSING

Building Permits in Principal Cities, September and October, 1929

THE Bureau of Labor Statistics presents herewith its second monthly report on building permits issued in cities of the United States having a population of 25,000 and over.

As pointed out before, the great importance of timely figures on building permits is that they present a barometrical reading of what is going to happen in the future, instead of an index of what has already happened. The cost of buildings as shown by permits issued is money that is to be spent in the future.

Table 1 shows the total estimated cost of new residential buildings, new nonresidential buildings, total building operations, and families provided for in new buildings, by districts, as shown by permits issued in September and October, together with the percentage of increase or decrease in October compared with September.

TABLE 1.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL BUILDING OPERATIONS IN CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER, BY GEOGRAPHICAL DIVISIONS

Geographical division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwelling houses					
	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929
New England	$6,117,750	$7,121,750	678	749	$4,045,888	$6,659,504	$12,169,827	$16,959,673
Middle Atlantic	24,476,300	24,994,851	3,369	2,805	28,290,288	41,506,735	60,741,136	76,646,022
East North Central	19,355,985	19,642,242	3,965	3,499	23,884,469	33,186,331	50,144,943	61,817,292
West North Central	2,603,925	2,325,370	738	661	3,851,280	1,867,380	8,498,213	5,929,429
South Atlantic	5,436,065	3,469,839	1,136	696	3,277,835	5,604,625	10,593,510	11,735,406
South Central	5,294,977	2,608,331	914	915	4,469,809	3,557,159	10,793,844	6,971,678
Mountain and Pacific	8,507,902	9,342,061	2,370	2,750	8,959,253	9,556,974	20,850,172	21,972,690
Total	71,792,904	69,504,444	13,170	12,075	76,778,822	101,938,708	173,791,645	202,032,190
Per cent of change		−3.2		−8.3		+32.8		+16.2

Total building operations for which permits were issued in the 269 cities from which reports werer eceived in October indicated an expenditure of $202,032,190, an increase of 16.2 per cent over the expenditure of $173,791,645 which the September permits show in these cities.

Residential buildings decreased 3.2 per cent in estimated cost, comparing October with September, while nonresidential buildings increased 32.8 per cent in estimated expenditures. Family dwelling units were provided in new buildings for 12,075 families according to permits issued in these cities during October, a decrease of 8.3 per cent from the 13,170 provided for according to permits issued during September.

The cost figures as shown in these tables are for the cost of the building only; no land costs are included. Data are received from city building officials, and only buildings to be erected in the corporate limits of each city are included in their reports.

The States of New Jersey, New York, Massachusetts, Illinois, and Pennsylvania, through their departments of labor, are cooperating with the Federal bureau in collecting this information.

Table 2 shows the estimated cost of new residential buildings, new nonresidential buildings, total building operations, and the number of families provided for in new dwellings in each of the 269 cities of the United States having a population of 25,000 or over. Totals and percentages of increase or decrease in expenditures for each class of building and in number of families provided for are shown by geographical divisions. Reports were received for both September and October from 46 cities in New England, 59 in the Middle Atlantic States, 67 in the East North Central States, 21 in the West North Central States, 31 in the South Atlantic States, 19 in the South Central States, and 26 in the Mountain and Pacific States.

New England States

In the cities which reported for both September and October there was an increase of 16.4 per cent in the expenditures for residential buildings in October as compared with September. There was an increase of 10.5 per cent in families provided with dwellings in new buildings. New nonresidential buildings increased 64.6 per cent in October as compared with September. This increase was largely due to the new law school for Yale University at New Haven, which will be erected at an estimated cost of $3,000,000. Total building operations increased 39.4 per cent in New England, comparing permits issued in October with those issued in September.

No reports were received from the following New England cities: Hartford and New London, Conn., and Worcester, Mass.

Middle Atlantic States

The Middle Atlantic States, which show the largest expenditure for building operations of any geographical division, show an increase in estimated expenditures for each class of new buildings and for total building operations, comparing their October with their September building permit record.

Permits issued in this group of States for October show an increase of 2.1 per cent in the estimated cost of new residential buildings. Nonresidential buildings increased 46.7 per cent in estimated expenditures. Total building operations for which permits were issued

in this district during October will cost 26.2 per cent more than the total building operations indicated by the September permits. There was a decrease of 16.7 per cent, however, in the new family dwelling units projected. The increase shown above for new residential building was caused by increased expenditures for hotels.

There was an increase in indicated expenditures in every borough of Greater New York except in the Bronx, where there was a slight falling off. Permits issued in Philadelphia during October show an increase of over 100 per cent compared with September. In Pittsburgh there was a slight decrease, comparing October with September.

No reports were received from Kearny, Newark, or Trenton, N. J., or from Chester, Harrisburg, Lebanon, Reading, or Wilkes-Barre, Pa.

East North Central States

THERE was an increase of 1.5 per cent in the estimated expenditures for new residential buildings as shown by permits issued in the East North Central Division, comparing October with September. The new nonresidential buildings for which permits were issued in October in this district show an increase of 38.9 per cent over the same class of buildings for which permits were issued in September. Building operations as a whole call for an expenditure of 23.3 per cent more than those projected during September. There was, however, a decrease of 11.8 per cent of the family units in new buildings, comparing October permits with September permits.

There was a large increase in both residential and nonresidential buildings in the city of Chicago in October as compared with September. Permits issued in the mid-west metropolis during October call for an expenditure of $23,629,030, compared with $12,026,015 during September.

Permits issued in Cleveland during October also show a marked increase in indicated expenditures as compared with September. In contrast there was a falling off of indicated expenditures in Detroit, comparing the latter month with the former.

The following cities in this district failed to send their reports for October: East Chicago and Ft. Wayne, Ind., Battle Creek and Jackson, Mich., Canton, Lorain, Youngstown, and Zanesville, Ohio, and La Crosse, Wis.

West North Central States

DECREASES were shown in residential building, nonresidential building, and total building operations in this district, comparing permits issued in October with those issued during September. The expenditure for residential building as shown by permits issued during October decreased 10.7 per cent. The new nonresidential buildings for which permits were issued during October will cost 51.5 per cent less than those for which permits were issued during September. Indicated expenditures for all building operations decreased 30.2 per cent in this district, comparing October with September. Hutchinson, Kans., Kansas City, Mo., and St. Paul, Minn., were the only cities in this division which did not report for October.

South Atlantic States

THERE was a decrease of 36.2 per cent in the estimated cost of new residential buildings for which permits were issued in the South Atlantic States, comparing October with September. In contrast, permits issued for nonresidential buildings show an increase of 71 per cent and total building operations an increase of 10.8 per cent in estimated cost during the latter month. The number of families provided with dwelling places in new buildings decreased 38.7 per cent in October as compared with September.

No October reports were received for Augusta, Ga., Spartanburg, S. C., Charleston, W. Va., or Wilmington, N. C.

South Central States

IN THE South Central Division decreases were shown in expenditures for both classes of new buildings and for all building operations according to permits issued in October. The decrease was largest in residential buildings, the October permits indicating 50.7 per cent less expenditure than the September permits. A decrease of 20.4 per cent was indicated for nonresidential buildings and 35.4 per cent for all building operations. New dwelling units increased one-tenth of 1 per cent.

No reports were received for Fort Smith or Little Rock, Ark., Birmingham, Ala., Covington or Louisville, Ky., Tulsa, Okla., Chattanooga, Tenn., Beaumont, El Paso, Galveston, Houston, Laredo, or Port Arthur, Tex.

Mountain and Pacific States

INCREASES were shown all along the line in the Mountain and Pacific division. Residential buildings for which permits were issued in October increased 9.8 per cent in estimated cost, nonresidential buildings 6.7 per cent, and total building operations 5.4 per cent. New family dwelling units increased 16 per cent, comparing October with September.

Notable increases in expenditures for building operations were indicated in both Los Angeles and San Francisco.

Only one city, San Jose, failed to report for October.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1929

New England States

City	New residential buildings				Nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new dwellings					
	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929
Connecticut:								
Bridgeport	$104,550	$88,400	28	22	$120,720	$15,219	$256,240	$204,133
Greenwich	417,000	900,000	21	41	53,060	90,635	544,425	1,023,870
Meriden	42,050	82,000	11	10	6,050	18,610	57,475	112,015
New Britain	11,000	86,800	1	12	5,458	19,015	43,766	131,660
New Haven	65,000	33,500	8	7	63,330	3,096,400	153,330	3,376,255
Norwalk	221,200	75,000	22	13	20,250	70,300	286,100	176,330
Stamford	160,100	110,000	24	16	182,530	102,790	369,055	252,940
Waterbury	101,500	97,000	22	15	13,750	48,800	175,900	217,950
Maine:								
Bangor	90,100	14,200	4	3	3,725	36,525	95,825	55,450
Lewiston	30,000	19,000	6	3	6,800	1,800	49,800	30,300
Portland	53,900	84,200	12	17	39,860	111,439	118,795	267,141
Massachusetts:								
Boston	444,300	859,500	98	113	618,500	1,115,430	1,507,950	3,054,558
Brockton	17,500	63,000	4	10	16,750	40,015	59,325	132,645
Brookline	17,000	442,500	1	14	7,750	18,175	47,710	498,300
Cambridge	2,054,200	1,533,500	3	6	558,410	48,430	2,737,745	1,746,367
Chelsea	0	0	0	0	9,450	77,950	15,425	97,020
Chicopee	43,000	20,000	7	5	9,550	35,650	60,650	68,350
Everett	8,000	17,000	2	5	13,750	205,125	27,850	271,325
Fall River	18,300	34,400	3	9	13,860	13,625	102,910	57,635
Fitchburg	25,500	15,500	6	2	23,296	9,745	52,786	28,550
Haverhill	17,950	22,700	8	7	14,965	6,445	43,330	51,525
Holyoke	19,500	45,400	2	6	10,950	6,500	85,300	138,675
Lawrence	0	19,500	0	7	13,140	16,275	92,290	138,340
Lowell	1,800	15,300	2	4	4,420	5,185	60,960	35,795
Lynn	55,000	79,000	13	17	446,265	51,860	521,990	211,630
Malden	35,000	41,000	7	8	90,135	43,253	151,815	141,506
Medford	137,900	102,500	28	23	15,375	40,790	173,480	150,690
New Bedford	14,000	0	2	0	92,965	10,775	126,080	53,225
Newton	279,500	421,000	32	40	56,090	103,187	413,275	568,627
Pittsfield	195,600	112,500	26	18	14,175	56,350	227,075	181,205
Quincy	160,200	111,800	38	18	150,000	24,855	363,773	163,382
Revere	74,500	21,200	15	7	9,475	2,825	106,885	49,780
Salem	41,650	25,800	8	6	55,375	19,970	125,711	133,595
Somerville	23,000	20,000	6	4	619,431	12,595	674,558	45,778
Springfield	72,800	50,300	19	11	22,395	64,520	165,705	226,405
Taunton	16,000	18,000	3	4	13,333	50,391	61,708	87,246
Waltham	110,900	123,800	26	30	73,250	118,250	200,130	259,400
Watertown	108,500	112,000	22	23	14,700	9,600	125,975	128,050
New Hampshire:								
Manchester	51,950	33,350	10	8	15,265	9,117	102,428	54,619
Rhode Island:								
Central Falls	0	31,500	0	10	164,335	9,450	167,335	102,550
Cranston	146,500	242,700	30	54	16,910	53,538	172,460	306,388
East Providence	70,300	145,500	15	27	58,500	47,635	140,477	213,608
Newport	20,500	312,000	4	4	9,000	237,000	44,105	557,550
Pawtucket	125,900	102,800	27	26	16,700	56,350	183,620	186,975
Providence	414,600	327,600	52	62	257,000	419,250	861,600	934,000
Woonsocket	0	9,000	0	2	4,890	7,860	10,700	36,335
Total	6,117,750	7,121,750	678	749	4,045,888	6,659,504	12,169,827	16,959,673
Per cent of change		+16.4		+10.5		+64.6		+39.4

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1929—Continued

Middle Atlantic States

City	New residential buildings				Nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new dwellings					
	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929
New Jersey:								
Atlantic City	$8,000	$1,353,185	2	13	$12,380	$29,500	$52,255	$1,480,191
Bayonne	15,000	4,000	3	1	6,150	296,300	26,150	308,150
Bloomfield	150,000	56,700	27	12	377,000	159,925	530,000	223,185
Camden	51,000	74,700	16	20	28,725	68,470	109,935	271,091
Clifton	211,000	156,000	42	36	31,550	57,430	251,125	227,665
East Orange	38,900	354,500	10	75	63,940	25,820	140,716	421,284
Elizabeth	135,000	166,000	27	33	77,500	38,200	212,500	204,200
Hoboken	0	0	0	0	30,500	0	49,800	20,666
Irvington	74,650	67,000	15	14	35,550	15,910	120,675	101,425
Jersey City	109,000	240,500	27	55	1,815,760	256,390	2,030,770	613,990
Montclair	139,000	94,500	9	8	17,700	41,296	201,855	157,261
New Brunswick	35,000	37,800	5	7	16,400	13,700	62,740	75,915
Orange	10,000	80,000	1	5	19,050	11,925	59,235	134,075
Passaic	32,300	38,000	3	5	9,850	1,705,725	86,295	1,777,887
Paterson	91,500	261,600	20	77	28,174	110,749	202,699	479,794
Perth Amboy	10,740	15,500	3	4	9,325	109,370	58,490	165,220
Plainfield	46,800	131,000	11	15	10,625	5,300	96,624	174,758
Union City	12,500	121,000	4	42	4,500	38,700	38,275	181,155
West New York	0	11,000	0	2	102,900	46,500	119,700	69,140
New York:								
Albany	115,500	325,000	10	25	398,139	147,450	576,337	552,240
Amsterdam	13,800	40,000	2	4	368,000	6,800	387,200	49,300
Auburn	29,800	29,000	5	5	9,670	9,600	47,728	59,745
Binghamton	42,300	115,300	6	17	107,862	210,198	312,526	364,104
Buffalo	570,500	469,500	175	114	6,847,311	1,754,258	7,490,606	2,315,023
Elmira	16,950	0	4	0	30,450	32,950	80,603	44,154
Jamestown	61,100	76,650	15	18	9,500	54,810	162,240	197,770
Kingston	20,000	127,400	1	4	10,075	5,540	48,330	291,575
Mount Vernon	184,500	169,000	15	16	28,850	130,225	523,625	833,400
Newburgh	47,000	12,000	8	2	54,000	21,050	114,600	39,050
New Rochelle	117,000	176,500	5	15	223,279	368,019	362,793	656,544
New York City—								
The Bronx	776,400	996,100	128	188	1,466,000	951,375	2,677,852	2,311,920
Brooklyn	1,639,000	3,453,950	338	420	3,220,720	2,471,985	5,658,490	6,841,765
Manhattan	12,825,000	9,093,000	995	362	4,174,800	19,465,950	18,993,425	31,216,015
Queens	1,775,900	1,929,500	375	405	2,370,209	1,916,353	4,513,223	5,340,473
Richmond	373,500	497,200	149	68	389,190	1,149,560	818,485	1,734,682
Niagara Falls	80,900	300,000	16	30	21,146	477,671	139,682	877,001
Poughkeepsie	35,000	120,550	5	8	104,150	1,100	153,943	167,170
Rochester	209,250	212,725	36	32	292,901	642,479	595,133	986,799
Schenectady	165,500	200,300	35	26	254,300	34,500	487,175	256,050
Syracuse	299,000	216,600	52	46	825,117	272,960	1,266,153	615,865
Troy	38,000	64,300	8	10	9,100	4,919	72,625	95,422
Utica	79,800	47,300	12	8	129,000	35,100	248,050	244,600
Watertown	45,000	23,700	6	6	3,335	9,675	60,896	44,959
White Plains	63,000	126,000	6	12	39,250	100,375	115,197	256,345
Yonkers	480,000	185,800	47	35	92,555	183,820	1,130,002	444,864
Pennsylvania:								
Allentown	95,000	155,500	17	25	75,900	46,525	195,800	242,797
Altoona	67,535	46,450	11	10	39,209	31,804	139,475	116,700
Bethlehem	133,925	40,500	21	6	27,855	366,725	735,060	462,235
Butler	0	16,000	0	5	8,750	104,900	15,895	122,100
Easton	0	34,050	0	5	24,965	7,648	75,701	59,323
Erie	85,350	140,350	16	23	128,533	134,155	404,690	300,505
Hazleton	5,400	12,500	1	1	8,477	7,420	22,631	26,757
Johnstown	24,000	31,100	2	5	8,994	12,050	45,254	102,815
Lancaster	13,000	139,000	4	30	26,115	8,250	50,575	188,410
McKeesport	122,900	130,100	21	18	112,325	30,810	260,282	187,347
New Castle	20,400	43,300	4	7	4,075	143,760	31,335	189,255
Norristown	48,600	20,000	10	4	43,525	14,380	111,235	61,740
Philadelphia	1,061,500	1,062,000	242	230	2,254,055	6,380,520	3,681,110	7,929,060
Pittsburgh	1,290,600	655,600	297	106	1,221,045	603,392	2,860,677	2,047,677
Scranton	52,600	40,075	13	10	10,925	93,805	90,520	438,372
Wilkinsburg	97,900	47,375	16	7	20,925	8,000	155,825	62,400
Williamsport	36,000	75,091	10	6	45,512	8,848	89,047	94,663
York	47,500	35,500	5	7	52,615	13,811	289,266	89,979
Total	24,476,300	24,994,851	3,369	2,805	28,290,288	41,506,735	60,741,136	76,646,022
Per cent of change		+2.1		−16.7		+46.7		+26.2

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1929—Continued

East North Central States

City	New residential buildings				Nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new dwellings					
	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929
Illinois:								
Alton	$19,400	$34,872	5	8	$6,117	$19,165	$39,012	$85,809
Aurora	63,000	66,200	13	13	16,435	25,670	91,450	124,374
Belleville	63,183	55,400	14	13	38,580	144,215	102,138	205,665
Bloomington	121,000	66,000	13	10	3,000	50,500	147,000	127,500
Chicago	4,946,100	7,175,400	750	856	6,573,000	15,945,850	12,026,015	23,629,030
Cicero	156,000	51,000	19	7	326,705	54,420	534,931	119,930
Danville	59,000	40,300	17	9	12,300	97,750	94,837	146,050
Decatur	84,200	166,800	20	19	41,030	154,515	131,180	339,315
East St. Louis	96,200	89,800	35	27	16,825	123,110	126,113	231,185
Elgin	31,200	25,160	7	6	43,345	70,405	90,330	113,818
Evanston	133,000	268,000	10	20	101,500	35,750	325,150	371,000
Joliet	148,500	64,500	17	9	83,500	297,100	257,257	399,700
Moline	83,900	74,000	19	14	67,674	18,405	263,784	115,185
Oak Park	86,000	98,000	5	13	112,580	13,955	223,290	118,105
Peoria	189,550	182,600	42	38	54,505	423,130	318,020	605,730
Quincy	12,800	89,700	4	19	12,140	7,710	40,790	101,210
Rockford	162,000	254,800	43	70	48,660	48,985	262,960	359,460
Rock Island	51,300	44,400	14	16	13,585	11,155	133,470	441,044
Springfield	113,800	69,600	27	15	53,900	8,594	182,712	119,929
Indiana:								
Anderson	60,900	48,450	18	18	51,050	225	124,190	60,850
Elkhart	49,600	35,250	11	11	5,285	34,493	84,445	95,759
Evansville	125,500	76,900	36	21	56,125	154,205	208,355	251,302
Gary	109,500	41,000	24	11	850,860	50,550	1,020,235	152,250
Hammond	153,000	80,000	34	18	45,400	131,100	230,700	301,500
Indianapolis	608,650	630,875	132	138	839,477	384,051	1,563,060	1,139,072
Kokomo	22,700	34,300	6	8	273,281	25,930	301,971	64,261
Marion	(1)	8,000	(1)	2	(1)	13,000	(1)	30,000
Muncie	22,334	15,317	8	7	16,832	20,035	52,491	69,242
Richmond	86,400	37,050	22	10	37,600	8,200	149,658	49,870
South Bend	297,230	249,100	63	55	185,800	317,300	532,435	670,400
Terre Haute	19,700	35,500	4	4	13,960	15,590	51,730	59,070
Michigan:								
Bay City	25,000	16,500	7	1	62,840	3,760	109,692	41,410
Detroit	4,203,161	3,141,975	960	698	3,771,178	1,556,368	9,928,308	6,767,971
Flint	634,837	691,788	167	165	742,266	1,319,415	1,837,829	2,130,293
Grand Rapids	142,400	146,600	41	39	107,950	300,645	377,100	604,370
Hamtramck	15,000	6,000	3	2	202,825	5,925	254,400	38,550
Highland Park	0	0	0	0	147,765	73,340	174,515	99,790
Kalamazoo	64,225	37,900	9	10	204,931	245,075	325,716	306,844
Lansing	118,025	103,100	30	26	119,725	745,295	316,345	995,195
Muskegon	84,800	40,200	29	14	18,855	39,590	141,277	119,523
Pontiac	318,400	109,575	90	37	209,865	556,210	595,595	723,895
Port Huron	14,250	3,600	7	2	150	2,000	16,100	7,550
Saginaw	180,800	133,750	60	29	23,894	18,688	263,464	181,463
Ohio:								
Akron	462,800	386,650	100	82	197,330	700,914	759,200	1,147,769
Ashtabula	20,600	0	2	0	20,800	35,955	48,725	41,010
Cincinnati	716,340	1,023,145	105	178	3,662,150	2,717,840	4,712,725	4,051,595
Cleveland	800,000	849,500	160	119	813,425	2,161,775	2,087,250	5,645,125
Columbus	309,650	316,100	59	60	672,250	820,700	1,066,850	1,316,250
Dayton	76,800	25,200	15	7	195,958	496,011	756,720	1,006,620
East Cleveland	0	0	0	0	43,967	128,047	45,812	157,642
Hamilton	34,600	42,750	11	10	4,451	509,894	48,204	581,728
Lakewood	(1)	50,500	(1)	12	(1)	10,560	(1)	71,775
Lima	0	4,200	0	2	6,120	3,300	9,665	20,150
Mansfield	42,100	52,200	9	11	32,468	2,725	78,885	63,525
Marion	11,500	10,100	4	4	63,220	7,500	78,120	17,600
Newark	40,100	34,400	11	11	5,085	11,375	45,885	49,050
Portsmouth	20,600	5,900	7	4	10,175	12,800	36,085	23,700
Springfield	47,050	22,400	16	8	72,215	4,330	139,935	34,980
Steubenville	59,000	43,400	20	14	47,450	17,700	108,250	65,050
Toledo	325,900	189,400	74	55	208,865	535,421	639,456	915,646
Warren	91,300	155,350	28	47	17,420	138,165	126,785	328,905

[1] Not reported.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1929—Continued

East North Central States—Continued

City	New residential buildings				Nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new dwellings					
	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929
Wisconsin:								
Fond du Lac	$0	$13,700	0	3	$68,681	$7,705	$77,152	$36,380
Green Bay	46,700	86,300	12	16	424,780	41,720	483,105	137,843
Kenosha	439,700	112,135	31	19	129,211	48,925	807,062	178,045
Madison	(1)	149,900	(1)	31	(1)	64,025	(1)	271,325
Milwaukee	1,269,350	1,164,600	320	232	1,180,334	787,206	2,804,573	2,320,848
Oshkosh	7,600	22,000	3	22	16,040	31,574	52,827	56,175
Racine	464,250	348,950	125	65	107,520	106,944	676,170	493,474
Sheboygan	77,900	72,700	15	17	256,709	27,111	353,323	118,815
Superior	15,600	29,900	3	7	14,550	272,320	52,129	324,898
Total	19,355,985	19,642,242	3,965	3,499	23,884,469	33,186,331	50,144,943	61,817,292
Per cent of change		+1.5		−11.8		+38.9		+23.3
West North Central States								
Iowa:								
Burlington	$13,000	$24,500	4	7	$6,875	$7,775	$53,375	$35,163
Cedar Rapids	42,050	18,550	10	6	75,131	162,500	160,143	209,813
Council Bluffs	9,000	21,000	2	6	43,000	13,600	83,400	61,600
Davenport	71,550	90,700	16	19	26,160	170,095	182,370	283,085
Des Moines	115,900	142,800	30	25	388,971	46,137	538,162	205,408
Dubuque	34,500	27,950	10	10	15,380	105,890	66,001	146,283
Ottumwa	33,500	24,000	7	4	239,050	7,000	276,000	31,000
Sioux City	55,200	44,400	15	14	94,150	27,360	153,950	117,510
Waterloo	90,875	60,500	22	22	48,460	33,460	148,725	105,160
Kansas:								
Kansas City	54,950	32,100	24	16	254,038	15,198	317,528	55,203
Topeka	52,300	71,800	13	14	267,938	75,605	338,483	188,525
Wichita	414,120	375,275	123	147	489,124	80,540	987,159	509,145
Minnesota:								
Duluth	20,200	50,800	4	9	463,445	109,570	584,717	187,418
Minneapolis	400,380	472,595	77	122	370,250	225,330	1,076,590	1,028,725
Missouri:								
Joplin	14,700	33,000	4	8	23,000	29,625	39,397	73,030
Springfield	73,000	66,650	25	22	23,685	29,725	115,435	140,000
St. Joseph	44,550	17,200	11	8	2,126	18,575	150,389	41,630
St. Louis	725,450	473,550	252	138	874,627	249,677	2,403,764	1,221,403
Nebraska:								
Lincoln	135,450	105,500	28	16	19,320	228,738	167,445	351,573
Omaha	157,250	105,000	43	29	117,500	63,280	590,130	702,555
South Dakota:								
Sioux Falls	46,000	67,500	18	19	9,050	167,700	65,050	235,200
Total	2,603,925	2,325,370	738	661	3,851,280	1,867,380	8,498,213	5,929,429
Per cent of change		−10.7		−10.4		−51.5		−30.2
South Atlantic States								
Delaware:								
Wilmington	$171,600	$279,500	23	18	$45,575	$83,630	$246,625	$985,608
District of Columbia:								
Washington	2,655,400	1,025,950	488	156	342,650	1,802,529	3,156,605	3,036,234
Florida:								
Jacksonville	64,350	62,350	25	23	100,536	140,180	236,071	264,440
Miami	9,700	40,650	4	6	168,130	172,525	237,199	335,957
Pensacola	(1)	43,310	(1)	13	(1)	8,000	(1)	87,839
St. Petersburg	11,500	15,100	3	5	3,700	69,700	65,400	109,600
Tampa	19,000	14,000	14	9	14,954	24,770	87,152	99,045

[1] Not reported.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1929—Continued

South Atlantic States—Continued

City	New residential buildings				Nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new dwellings					
	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929
Georgia:								
Atlanta	$252,800	$306,400	69	76	$492,336	$533,885	$833,756	$909,744
Columbus	65,500	18,675	12	10	3,935	17,610	78,760	45,380
Macon	9,000	48,800	3	3	25,980	9,300	47,072	103,001
Savannah	41,700	38,350	11	11	22,315	19,420	72,015	64,155
Maryland:								
Baltimore	1,220,200	856,000	280	180	652,900	1,058,700	2,707,700	2,684,400
Cumberland	87,166	7,500	1	2	7,370	10,286	98,692	23,515
Hagerstown	27,700	17,500	6	5	96,540	4,220	125,315	23,720
North Carolina:								
Asheville	13,300	2,500	3	1	215,460	7,345	249,575	38,660
Charlotte	86,460	136,750	23	44	77,200	13,765	191,622	209,777
Durham	33,200	105,850	9	10	33,750	1,800	145,650	150,452
Greensboro	22,000	35,800	9	17	64,364	32,585	95,215	81,829
Winston-Salem	127,750	63,720	20	17	391,172	802,575	540,213	884,022
South Carolina:								
Charleston	3,800	53,700	3	15	1,765	16,040	65,795	95,864
Columbia	107,700	25,900	28	11	3,780	135,500	124,175	179,265
Greenville	40,100	33,085	12	9	165,200	16,890	228,545	58,093
Virginia:								
Lynchburg	23,075	28,050	9	6	12,655	20,440	61,440	59,148
Newport News	43,500	6,950	9	6	45,160	1,707	108,150	25,028
Norfolk	66,100	24,900	17	8	65,860	68,938	157,455	178,118
Petersburg	16,500	12,675	4	3	1,480	166,785	31,100	183,010
Portsmouth	17,450	9,900	6	2	7,120	11,650	36,615	40,588
Richmond	104,064	69,575	16	15	40,373	246,859	262,678	543,186
Roanoke	72,400	82,009	20	18	78,703	32,609	157,668	151,228
West Virginia:								
Clarksburg	8,550	0	4	0	8,100	25,605	20,260	31,230
Huntington	5,500	26,000	3	6	54,900	40,700	62,400	66,700
Wheeling	9,000	21,700	2	4	33,872	16,077	62,592	74,409
Total	5,436,065	3,469,839	1,136	696	3,277,835	5,604,625	10,593,510	11,735,406
Per cent of change		−36.2		−38.7		+71.0		+10.8

South Central States

Alabama:								
Mobile	$62,950	$33,929	29	20	$110,500	$3,500	$197,216	$54,285
Montgomery	(1)	35,250	(1)	28	(1)	77,350	(1)	143,198
Kentucky:								
Lexington	2,625	80,200	4	17	9,175	55,245	26,348	140,920
Newport	6,000	6,600	2	3	13,300	400	19,300	7,000
Paducah	8,025	23,650	8	9	5,775	1,750	116,850	27,650
Louisiana:								
Baton Rouge	11,250	2,725	5	3	15,590	565	30,493	9,629
New Orleans	129,730	99,747	38	33	468,255	146,850	727,917	362,917
Shreveport	171,833	107,887	59	47	96,488	20,250	312,251	186,179
Oklahoma:								
Muskogee	8,500	8,400	5	4	450	64,482	8,950	77,407
Oklahoma City	3,236,000	714,000	179	227	623,450	182,570	3,898,240	979,020
Okmulgee	0	0	0	0	6,500	6,050	7,000	11,555
Tennessee:								
Knoxville	118,720	69,861	29	30	467,888	38,220	607,820	116,878
Memphis	319,215	273,780	100	66	237,510	112,515	679,484	507,681
Nashville	61,700	81,500	32	29	451,560	142,030	657,059	268,256
Texas:								
Austin	129,893	138,995	65	55	147,287	54,310	320,083	197,908
Dallas	190,400	130,848	63	61	459,864	1,362,308	759,558	1,650,105
Fort Worth	275,825	216,962	107	83	1,082,910	849,413	1,411,397	1,125,722
San Antonio	479,520	403,730	169	179	209,590	99,635	806,070	594,830
Waco	73,466	58,867	17	13	21,932	251,866	119,110	321,526
Wichita Falls	9,325	156,650	3	36	41,785	165,200	88,698	337,210
Total	5,294,977	2,608,331	914	915	4,469,809	3,557,159	10,793,844	6,971,678
Percent of change		−50.7		+0.1		−20.4		−35.4

[1] Not reported.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, SEPTEMBER AND OCTOBER, 1929—Continued

Mountain and Pacific States

City	New residential buildings				Nonresidential buildings, estimated cost		Total construction (including alterations and repairs) estimated cost	
	Estimated cost		Families provided for in new dwellings					
	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929	September, 1929	October, 1929
Arizona:								
Phoenix	$297,468	$142,384	104	69	$173,270	$128,720	$498,168	$320,834
Tucson	96,750	73,442	22	21	36,475	52,070	150,460	163,455
California:								
Alameda	58,985	66,700	9	21	6,150	4,596	79,261	81,525
Berkeley	175,225	105,525	45	38	25,885	71,224	259,721	234,897
Fresno	46,050	74,100	11	18	62,952	53,078	174,418	195,325
Long Beach	621,350	874,250	209	339	385,495	434,735	1,037,330	1,357,045
Los Angeles	3,120,809	3,365,812	1,065	1,116	2,731,212	3,908,655	6,629,710	8,193,199
Oakland	374,210	744,941	100	132	1,033,895	561,306	1,715,994	1,454,645
Pasadena	273,570	368,995	24	39	570,610	182,439	996,790	667,899
Sacramento	113,050	337,830	34	89	156,901	43,175	326,667	457,962
San Diego	348,025	296,460	82	70	660,885	170,055	1,060,585	531,990
San Francisco	739,175	685,302	169	167	627,009	1,316,093	1,828,612	2,424,001
Stockton	27,550	25,500	9	15	263,110	22,545	309,045	105,898
Vallejo	16,000	18,750	4	6	41,690	9,900	74,450	35,544
Colorado:								
Colorado Springs	49,000	9,000	7	5	6,015	15,290	75,020	38,290
Denver	480,500	402,950	87	122	186,850	386,150	880,350	1,000,450
Pueblo	30,700	28,400	13	8	15,760	7,240	63,319	97,262
Montana:								
Butte	7,905	1,800	10	1	5,154	930	13,059	18,420
Great Falls	[1]	82,000	[1]	29	[1]	84,685	[1]	178,350
Oregon:								
Portland	640,500	532,400	91	130	823,275	880,400	1,862,845	1,615,585
Utah:								
Ogden	17,500	11,500	7	4	80,700	5,300	105,400	61,400
Salt Lake City	126,330	287,200	34	86	319,010	49,802	526,960	378,502
Washington:								
Bellingham	16,350	23,300	8	11	152,125	21,655	181,020	58,085
Everett	15,500	19,800	6	7	83,920	444,540	125,700	509,245
Seattle	661,250	686,450	174	189	385,020	303,730	1,443,290	1,228,070
Spokane	97,150	112,270	27	28	66,865	396,421	272,308	559,427
Tacoma	57,000	47,000	19	19	59,020	86,925	159,690	183,735
Total	8,507,902	9,342,061	2,370	2,750	8,959,253	9,556,974	20,850,172	21,972,690
Per cent of change		+9.8		+16.0		+6.7		+5.4

[1] Not reported.

Reports were received from 6 cities for October only. Data for these 6 cities are shown in Table 2 but are not included in the totals.

Study of Housing in Relation to Certain Social Problems, in Detroit

THE Department of Health of the city of Detroit, Mich., has just published a report entitled "City Wide Housing Study and Its Relation to Juvenile Delinquency, Major Crime, and Important Health Problems." [3]

While the report of this study and its methods leave much to be desired, it is significant in many respects. A house-to-house canvass

[3] Detroit Department of Health. City Health, July and August, 1929.

was made of the city, unfortunately omitting Hamtramck. The returns were then divided into 10 classes, each class covering about the same population but graded according to the index of density (i. e. average number of persons per room), ranging from an index of 0.6013 in class 1 to an index of 1.0497 in class 10.

Some of the facts shown are merely curious and have no significance whatsoever. For instance the death rate per 1,000 population was less in some of the less crowded groups than in the more crowded ones, although there is no apparent relation as indicated by the figures between the two. The same is true of the birth rate, though here the births per 1,000 population are slightly lower in the most crowded group than in most of the others.

The significant things, however, refer to, first, infant mortality, where the rates in the three most crowded districts are 78.65, 95.01, and 83.82 as against rates per 1,000 births of 63.81, 57.35, and 52.86 in the three least crowded districts.

Upon the subject of children's diseases the figures for the most part indicate little, except for diphtheria where the rate per thousand is much higher in the congested districts. Deaths from pneumonia, however, while varying greatly among similar groups, do show a tremendous excess of deaths in the congested groups as against the less congested ones. For instance in class 2, where the index of density is 0.6615, the deaths from pneumonia are 63.47 per 100,000 population, whereas in class 7, with an index of density of 0.8251, the pneumonia death rate per 100,000 is 114.14; in class 8, with an index of density of 0.8729, there is a death rate from pneumonia of 113.56; in class 9, with a density index of 0.9297, there is a pneumonia death rate of 124.98. While this is much higher than in class 10, which has an index of density of 1.0497 and a death rate from pneumonia of 100.25 per 100,000, yet this latter group is much higher than the classes with a smaller index of density.

The same facts show for deaths from tuberculosis, where the four highest density groups have a tuberculosis death rate per 100,000 population of 114.89, 128.33, 135.46, and 132.64, as against a death rate from tuberculosis of 66.96, 44.90, and 44.62 in the three lowest density groups.

In the matter of criminal record there is a very marked difference between the cases of major crime per 1,000 population as the density index increases. While the rate of increase is not uniform, the criminal record which starts with 1.031 for the lowest density group finds its climax in group 7, which shows 7.464, rather than in group 10 which shows 6.092. Nevertheless the general trend is such that it must be admitted that the report makes a conclusive case as to the relation between population density and crime.

This is also apparent in delinquency cases among children, where the rate per 1,000 increases with a fair degree of regularity from the low to the high density index. The rate in the low density group is 1.293 per 1,000 of population. It is 5.239 in class 9 and 4.789 in class 10.

The Michigan Housing Association has done a very good piece of pioneer work, and one which might well be taken up in other cities.

WAGES AND HOURS OF LABOR

History of Wages in the United States from Colonial Times

THE most comprehensive historical study of American wages which has ever been made has just been issued as Bulletin No. 499 of the Bureau of Labor Statistics of the United States Department of Labor, under the title "History of Wages in the United States from Colonial Times to 1928."

This report attempts to present a picture of American wages from early colonial days to the present time. The picture is drawn necessarily in rather broad strokes. In general, the policy has been to select representative occupations in representative industries, and present for such occupations as continuous a record as possible of wages and hours of labor.

The main reason for the preparation of the present report was the desire to preserve in permanent form the principal contents of the bureau's early wage studies, as well as the still earlier records of colonial America. The printed reports containing these early data are for the most part long out of print and the unpublished documents are inaccessible to many persons who desire to use them. By bringing together and coordinating the various studies and documents it makes reference very much easier than has been the case in the past, when the tracing of wage movements in particular occupations or industries over a period of years required the thumbing of many volumes.

Because the source material for the earliest periods, 1607–1840, is scattered, lacking in consecutiveness, and seldom available in modern statistical form, the report has been divided into two sections, Parts 1 and 2. Part 1 is presented almost wholly in text form and treated from the historical viewpoint. Part 2, beginning with the year 1840, is entirely statistical in presentation, and the source material is derived entirely from the reports of the former United States Department of Labor and its successor, the Bureau of Labor Statistics of the present United States Department of Labor.

That chronological division, moreover, coincides, roughly at least, with the beginning of the industrial era, and with the development of definite occupational divisions within the various industries. Craft distinctions as we know them were not made in the colonial and provincial eras, either in the performance of work or in the payment of wages. The mechanic was apt to be a jack-of-all-trades, even though he might also be master of his own, for his skill could be used to advantage outside his own craft. This condition held true until the beginning of the eighteenth century. Even then the differences between the crafts were not marked until trade organizations began to spring up toward the close of the century. By 1800 wage rates appear for numerous crafts, with fairly well-defined jurisdictional

lines, but the rates themselves do not vary materially as between these different crafts, and the distinction between skilled and unskilled labor is not so strongly reflected in their pay as it became later, with the development of a pronounced craft consciousness.

Wage data and conditions of labor so far as the bureau has been able to secure them are given fully in Part 1 of the report for the following trades and industries: Building trades, shipbuilding, cabinetmaking, iron, glass, textiles, boots and shoes, clothing, printing and publishing, seamen, and agricultural and common labor. The same trades and industries, with the exception of seamen, are carried in Part 2, not only continuing the wage rates from 1840 to the present, but showing the divisions into crafts and occupations which followed industrial expansion.

In building, for example, two tradesmen, carpenters and bricklayers, represent the industry in the colonial and provincial eras, as shown in Part 1. From the beginning of the eighteenth century the generic "carpenter" is joined by the stonemason, the ornamental-iron worker, the painter and paper hanger, the plasterer, the cabinetmaker, and the wood carver. Wage rates for these occupations are followed through the eighteenth and early nineteenth centuries in Part 1. Part 2 continues wage data for the same trades from 1840 to 1928, adding new crafts—plumbing, electrical work, etc.—as they developed.

The treatment of other essential industries follows similar lines, showing not only the change in wages paid, but the occupational development from the worker in the early industries who did any and all work which the industry demanded, to the specialized occupations of to-day. In the early glass factories, for example, agreements stated specifically that the employee "is to work at anything he is put to, teazing alone excepted."

In the textile industry the early pay rolls are divided by mill departments—carding, spinning, weaving, dyeing and finishing, etc.—but make no distinction between occupations within the department, except in the case of overseers. That of course makes wage comparisons difficult, since the statistical data of the period after 1840 as shown in Part 2 are divided into the diversified occupations of a modern textile mill.

Trades and industries covered in Part 2 which do not appear in Part 1 are: Bakery trades; steel industry; tanners; metal trades other than iron and steel (blacksmiths are included in Part 1); mining industry; tobacco industry; and transportation.

Part 1, in addition to wage data, has a chapter dealing with colonial legislation controlling wages, and early working conditions. Another chapter presents the indenture system of labor, and shows to what extent the manual work of the new country was performed under a condition of "white servitude" for which no actual wages were paid. Barter and truck payment are also treated in a chapter on colonial money and money equivalents.

The data given make possible some interesting comparisons. Thus, carpenters in Massachusetts in 1840 earned from $1.17 to $1.67 a day, with an average of $1.25, and their regular hours per week were from 60 to 84 with an average of 65. In 1928 the Boston carpenter received $1.25 an hour and had a 44-hour week.

In 1847 the bricklayer in Pennsylvania received from $1.75 to $2 a day and worked 10 hours a day six days a week. In 1928 he received $1.62½ per hour and worked five 8-hour days a week.

In 1855 the shoemaker of Massachusetts earned $1.50 to $2.40 a day with an average of $1.95 and it was a 12-hour day and a 72-hour week. The McKay sewer, putting the sole on a shoe, in Massachusetts in 1928 received an average of $1.058 per hour with an average of 46.8 hours per week. To show how rapidly wage history has been made in very recent years, it is interesting to see that the corresponding figures for 1910 for the McKay sewer in Massachusetts was $0.327 per hour and that he worked a 55-hour week.

The male cotton weaver in Massachusetts earned but 33 cents a day in 1841, and he worked 14 hours a day, 84 hours per week. In 1860 he averaged 91 cents a day and worked 12 hours. In 1910 he earned 16.3 cents an hour with a 56-hour week, and in 1928 he earned 43.1 cents an hour, with a 50-hour week.

Salaries in Fire Departments in Principal Cities

QUESTIONNAIRES under date of August 30, 1929, were sent by the Bureau of Labor Statistics to the fire and police departments of all cities in the United States having a population of 100,000 or over according to the latest census estimates, asking for the salary scale of their employees (by occupations), with the number of persons receiving each specified annual salary. The figures for fire departments of all the cities except Tampa, which did not report, are here presented. The figures for the police departments will be published in a later number of the Monthly Labor Review.

In some of the cities the departments have broader organizations than in others and consequently the occupations or titles as reported by the different cities show considerable variation.

In order to make the rates comparable, salaries reported by the month have been brought to a yearly basis by taking twelve times the amount; weekly salaries have been reduced to an equivalent yearly basis by taking fifty-two and one-seventh times the amount, and daily wages have been increased to three hundred and sixty-five times the rate reported. In some cases the pay was reported on the hourly basis, and in these cases the hourly rate had to be given in the table, no computation being possible, as the hours worked per day were not reported.

The tabulation has been divided into four sections, A, B, C, and D, each relating to a certain group of occupations.

Each city was requested to report for all occupations in the department. It is believed that the more important occupations in sections A and B are fully reported, but it is evident that the occupations listed in sections C and D are not fully reported from all cities.

Section A contains the population of each city, the salaries of the chief, fire marshal or warden, secretary or chief clerk, master mechanic or superintendent of machinery, assistant master mechanic or assistant superintendent of machinery, the number and salaries of assistant or deputy chiefs, and the number and salaries of department, district, or battalion chiefs. In nearly all cities included in the study the

population figures are estimates made by the United States Census Bureau for the year 1928. In the cities for which no estimates were made for 1928, the latest figures of the Census Bureau are given.

Section B contains the number and salaries of captains, lieutenants, privates (firemen), engineers (pumpers), drivers, and chauffeurs, fire-alarm operators, electricians or fire-alarm linemen, and the salaries of the superintendent of fire alarm and his assistant.

Some cities have several grades of privates (firemen). Thus Akron, Ohio, reported four grades of privates. The first-year men receive $1,800 per year; then they automatically pass to the next grade and serve their second year at $1,953; then to the next grade and serve their third year at $2,016, and after having completed their third year they enter the highest grade which pays $2,079 per year. In the majority of the cities promotions are made on a yearly service basis. In some, however, efficiency tests are made in addition to time service. A few cities have only one class of privates. In cases where no engineers (pumpers) or drivers and chauffeurs are reported it probably may be assumed that privates are detailed to these occupations.

Section C contains all of the occupations reported which are not included in sections A, B, or D.

Section D contains all of the occupations reported in the marine departments. Twenty cities reported one or more occupations in this department.

As stated above sections C and D are probably incomplete for some of the cities.

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES

Section A

City and State	Population, 1928 (estimated by Census Bureau)	Salary of chief	Assistant or deputy chiefs		Department, district, or battalion chiefs		Salary of—			
			Number	Salary	Number	Salary	Fire marshal or warden	Chief clerk or secretary	Master mechanic or superintendent of machinery	Assistant master mechanic or assistant superintendent of machinery
Akron, Ohio	[1] 209,435	$4,500	1	$3,200			$2,520	$2,400	$2,835	
			1	3,080						
Albany, N. Y.	120,400	4,000			4	$2,400			2,400	
Atlanta, Ga.	255,100	5,000	1	3,066	5	2,688		3,066	2,613	
Baltimore, Md.	830,400	5,000	4	3,800	24	2,900		3,200	2,900	[2] 2,500
Birmingham, Ala.	222,400	5,000	1	3,240				2,400	3,000	2,520
			2	3,060						
			1	2,940						
Boston, Mass.	799,200	[3] 7,500	1	4,500	30	3,500		3,600		
		6,500	7	4,000						
Bridgeport, Conn.	[1] 143,555	5,500	4	3,500			[4]		3,500	3,000
Buffalo, N. Y.	555,800	[3] 7,000	2	[5] 4,500	21	3,500		2,730	3,500	
Cambridge, Mass.	125,800	4,500	2	3,500				2,190	[6] 3,000	[7] 2,483
Camden, N. J.	135,400	4,000	2	2,840	2	2,520	2,600			
Canton, Ohio	116,800	3,250	2	2,700					2,500	
Chicago, Ill.	3,157,400	[3] 8,000	1	[8] 6,800	56	4,000	[9] 4,500	[10] 6,800		
		[11] 8,000								

(Footnotes at end of section A of table.)

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Con.

Section A—Continued

City and State	Population, 1928 (estimated by Census Bureau)	Salary of chief	Assistant or deputy chiefs		Department, district, or battalion chiefs		Salary of—			
			Number	Salary	Number	Salary	Fire marshal or warden	Chief clerk or secretary	Master mechanic or superintendent of machinery	Assistant master mechanic or assistant superintendent of machinery
Cincinnati, Ohio	413,700	$6,000	2	$4,000	5	$3,500		$2,280	$3,000	
					2	3,300				
					1	3,000				
Cleveland, Ohio	1,010,300	6,440	1	4,416	25	3,543	$3,543	3,543	3,981	$3,543
			1	3,981				[12] 3,000		
Columbus, Ohio	299,000	3,720	2	2,880	5	2,340		2,580	2,580	
Dallas, Tex	217,800	5,000	1	3,300	2	2,400		3,000	2,640	2,280
					8	2,340				
Dayton, Ohio	184,500	4,000			4	3,000	3,000	2,280	2,400	2,100
Denver, Colo	294,200	4,200	1	3,000				2,580	2,580	
			9	2,700						
Des Moines, Iowa	151,900	4,000	1	3,000				2,820	2,280	2,100
			3	2,820						
Detroit, Mich	1,378,900	7,500	1	5,500	26	4,008	4,740	2,820	5,544	3,600
			1	5,000						
			8	4,500						
Duluth, Minn	116,800	3,500	1	2,820			2,040	1,500	2,460	
			1	2,520						
			1	2,400						
			1	2,340						
El Paso, Tex	117,800	4,200	1	3,120			2,100	1,980	2,520	2,100
Erie, Pa	[1] 102,093	3,360	1	2,280	2	2,280			2,700	[13] 1,980
Fall River, Mass	134,300	3,850	1	3,080	3	2,750		2,157	2,508	[13] 2,157
Flint, Mich	148,800	5,500	1	3,180					2,560	2,320
Fort Wayne, Ind	105,300	3,060	1	2,580	2	2,460		1,800	2,400	2,160
Fort Worth, Tex	170,600	3,840	2	2,640	4	2,340	2,640	2,340	2,400	2,100
Grand Rapids, Mich	164,200	4,000	1	3,000	3	2,500		1,825	2,491	2,008
Hartford, Conn	172,300	5,500	1	4,000			3,000		3,500	3,000
			4	3,000						
Houston, Tex	[1] 138,276	3,600	2	2,700	6	2,100	2,100	2,580		
			2	2,220				1,920		
Indianapolis, Ind	382,100	4,800	2	3,400	10	2,693		2,693	3,000	2,693
			1	3,063						
Jacksonville, Fla	140,700	4,800	1	3,690				2,700	2,400	
			1	2,940						
			2	2,730						
Jersey City, N. J	324,700	6,000	2	5,000	6	4,000		4,400	4,000	3,500
Kansas City, Kans	118,300	3,600	1	3,000			[14] 1,980	2,800	2,400	1,980
			2	2,800						
Kansas City, Mo	391,000	[15] 6,600	1	3,600	10	2,700		3,000	2,400	
		4,700	1	3,050				2,100		
Knoxville, Tenn	105,400	3,300	2	2,640			2,046		3,000	
Long Beach, Calif	110,700	4,500	1	3,600	5	3,000	([16])	([16])	3,000	
Los Angeles, Calif	[1] 576,673	7,200	1	5,400	21	3,600		[17] 3,600	3,600	
			10	4,800	1	4,800		[18] 3,600		
								3,420		
Louisville, Ky	329,400	4,500	1	3,500	5	2,700		1,800	2,500	2,100
Lowell, Mass	110,296	3,500	1	2,700				1,716		
			3	2,500						
Lynn, Mass	105,500	3,250	1	2,850	1	3,250				
			4	2,650						
Memphis, Tenn	190,200	4,800	1	3,000			2,700		2,500	2,400
			3	2,640						
Miami, Fla	156,700	5,000	1	3,600	3	3,120			2,580	
Milwaukee, Wis	544,200	6,000	2	3,600	18	3,120		{ 2,940 / 2,220 }	3,120	
Minneapolis, Minn	455,900	5,000	1	3,600	8	2,880	3,000	3,120	3,120	2,520
			1	3,300						
Nashville, Tenn	139,600	4,200	1	3,540			2,400	1,860	([19])	([20])
			1	2,940						
Newark, N. J	473,600	6,000	2	5,000	10	4,000		4,300	5,000	
New Bedford, Mass	119,539	3,850	1	3,080	3	2,750			2,610	
New Haven, Conn	187,900	5,000	1	3,300			3,400		3,200	2,473
			7	2,755						

(Footnotes at end of section A of section A of table.)

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Con.

Section A—Continued

City and State	Population, 1928 (estimated by Census Bureau)	Salary of chief	Assistant or deputy chiefs		Department, district, or battalion chiefs		Salary of—			
			Number	Salary	Number	Salary	Fire marshal or warden	Chief clerk or secretary	Master mechanic or superintendent of machinery	Assistant master mechanic or assistant superintendent of machinery
New Orleans, La	429,400	$6,000	1	$3,759			(21)	$3,696		
			11	3,009						
New York, N. Y	6,017,500	12,500	1	7,800	1	$6,800	[11] $6,800			
			1	7,300	25	5,800	[8] 4,700			
			1	6,800	86	4,790				
Norfolk, Va	184,200	4,000	4	2,820				1,890	$2,820	$2,400
Oakland, Calif	274,100	5,400	2	4,200	9	3,600		3,000	3,900	
Oklahoma City, Okla	[22] 104,080	3,900	2	2,520			2,400	2,100	2,400	
			4	2,400						
Omaha, Nebr	222,800	4,500	2	3,860	4	3,160		2,700	3,160	2,220
Paterson, N. J	144,900	4,200	1	3,200	3	3,000			2,700	[3] 2,600
Philadelphia, Pa	2,064,200	5,500	1	3,500	11	2,650	(23)	1,950	(24)	(24)
Pittsburgh, Pa	673,800	5,000	2	3,500	14	3,000	(25)	2,340	3,600	
Portland, Oreg	[1] 258,288	4,800	1	3,744	3	3,000	3,000	2,700	2,400	
			1	3,300						
Providence, R. I	286,300	4,576	2	3,432	6	3,146	(23)	3,718	2,703	2,302
Reading, Pa	115,400	2,400	2	1,800			(26)		2,400	2,100
Richmond, Va	194,400	3,500			4	2,424		1,800	2,460	
Rochester, N. Y	328,200	4,935	2	3,675	9	3,100		2,600	2,730	2,410
St. Louis, Mo	848,100	5,600	1	4,000	11	3,420		3,000	3,600	
St. Paul, Minn	[1] 234,698	4,000	1	3,624	10	2,677		2,004	3,234	2,445 2,404
Salt Lake City, Utah	138,000	3,600	1	2,520				2,040	2,520	
			1	2,460						
San Antonio, Tex	318,100	3,600	1	2,700	4	1,920	3,000	2,100	2,280	
			5	2,400						
San Diego, Calif	119,700	5,000	1	3,600	4	3,000	(5)	3,000	3,000	
San Francisco, Calif	585,300	7,200	4	4,800	21	4,200	(27)	4,500	4,200	3,300
Scranton, Pa	144,700	3,000	2	2,420	6	2,160	[28] 1,920	1,440	2,160	2,040
Seattle, Wash	383,200	6,000	2	3,420	13	3,000	3,420	2,760		
Somerville, Mass	102,700	3,800	1	3,000					2,750	2,190
			2	2,900						
Spokane, Wash	109,100	3,180	3	2,484				2,058	2,340	
Springfield, Mass	149,800	5,000	2	3,650	6	3,139			2,756	
Syracuse, N. Y	199,300	4,900	2	3,040	8	2,740			2,740	
Tacoma, Wash	110,500	3,000	2	2,520	1	2,400		2,160		
Toledo, Ohio	313,200	4,200	1	3,690	10	3,150		3,090	2,940	
			1	3,390						
Trenton, N. J	139,000	4,400	3	3,600	1	3,300		4,000	3,200	2,900
Tulsa, Okla	170,500	3,900	1	3,120			3,000	2,520	3,000	2,640
			1	3,060						
Utica, N. Y	104,200	4,000	1	2,900					2,300	2,050
			3	2,500						
Washington, D. C	552,000	5,200	2	3,500	14	3,250	3,250	3,600	3,250	2,500
Wilmington, Del	128,500	3,300	2	2,310			2,310	2,400	(23)	
Worcester, Mass	197,600	5,000	2	3,750	4	3,250		3,250	2,876	2,655
Yonkers, N. Y	121,300	5,000	2	3,800					2,800	
Youngstown, Ohio	174,200	3,540	2	2,560				[29] 2,700	2,340	

[1] Census of 1920.
[2] 2 at this rate.
[3] Commissioner.
[4] Chief of department acts.
[5] Deputy commissioner.
[6] Ranks captain.
[7] Ranks as engineman.
[8] Deputy chief fire marshal.
[9] 13 division fire marshals.
[10] Secretary and deputy fire commissioner.
[11] Chief fire marshal.
[12] Assistant secretary.
[13] 3 at this rate.
[14] 6 fire wardens at this rate.
[15] Fire director.
[16] Battalion chief acts.
[17] Secretary of commission.
[18] Executive clerk.
[19] Superintendent of fire alarm acts.
[20] Assistant superintendent of fire alarm acts.
[21] Under State supervision.
[22] Census estimate for 1924.
[23] Under police bureau.
[24] Under bureau of maintenance and repair.
[25] Employed by Allegheny County.
[26] Volunteers.
[27] Salary paid by underwriters fire patrol.
[28] 4 at this rate.
[29] Third assistant chief and secretary.

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section B

City and State	Captains		Lieutenants		Privates (firemen)			Engineers (pumpers)		Drivers and chauffeurs		Superintendent of fire-alarm	Assistant superintendent of fire-alarm	Fire-alarm operators		Electricians or fire-alarm linemen	
	Number	Salary	Number	Salary	Number	Salary	Classification	Number	Salary	Number	Salary			Number	Salary	Number	Salary
Akron, Ohio	27	$2,400			108	$2,079	After 3 years	3	$2,211			$2,835	$2,400	4	$2,079	3	$2,211
					3	2,016	Third year										
					3	1,953	Second year										
					23	1,800	First year										
Albany, N. Y	15	2,150	15	$2,050	157	1,800	After 2 years	3	1,850	[1] 38	$1,800	2,500	2,200	3	1,900	2	1,900
					6	1,700	Second year										
					0	1,500	First year										
Atlanta, Ga	21	2,373	42	2,352	108	2,100	After 4 years			66	2,226	2,613		6	2,352	2	2,373
					17	2,000	Fourth year										
					33	1,900	Third year										
					14	1,800	Second year										
					6	1,700	First year										
Baltimore, Md	94	2,000	92	1,875	876	1,700	After 2 years	52	1,950			3,200	2,900	7	2,300	11	2,000
					65	1,600	Second year						2,000				
					17	1,500	First year										
Birmingham, Ala	28	2,340	28	2,280	59	1,920	After 3 years	3	2,340	64	1,980	2,820	2,280	1	2,340	1	2,160
					31	1,860	Third year							5	2,040		
					51	1,800	Second year										
					0	1,740	First year										
Boston, Mass	87	2,700	130	2,500	880	2,100	After 5 years	111	2,200			4,000		[2] 3	2,700	5	2,281
					40	2,000	Fifth year							6	2,500	8	2,190
					33	1,900	Fourth year							[2] 3	2,100		
					33	1,800	Third year							[2] 3	1,900		
					37	1,700	Second year							[2] 1	1,600		
					78	1,600	First year										
Bridgeport, Conn	18	3,000	30	2,700	150	2,300	After 2 years	12	2,600	6	2,700	3,500	3,000	6	2,300	3	2,700
					8	2,200	Second year										
					0	2,100	First year										
Buffalo, N. Y	52	3,000	52	2,850	728	2,250		15	2,370	10	2,250	4,000	2,850	4	2,370	6	2,250
Cambridge, Mass	14	3,000	12	2,750	138	2,190	After 2 years	3	2,483			[4] 4,250	[5] 2,990	5	2,340	5	2,470
					9	1,983	Second year										
					12	1,783	First year										
Camden, N. J	15	2,400			176	2,040	After 4 years	9	2,220	(1)		2,500		3	1,800	2	1,800
	15	2,280			6	1,800	Fourth year										
					6	1,680	Third year										
					9	1,560	Second year										
					2	1,500	First year										
Canton, Ohio	16	2,500	2	2,250	79	2,040	After 1 year					2,700	2,000	(3)			

[1348]

Canton, Ohio	16	2,500	2	2,250	79	2,040	After 1 year					2,700	2,000	(7)				
					0	1,800	Second 6 months											
					0	1,700	First 6 months											
Chicago, Ill	193	3,200	256	2,900	1,227	2,500	After 2½ years	279	2,880			[8] 5,000		11	4,080	4	3,900	
					192	2,440	1 year							11	3,900			
					267	2,320	do											
					96	2,140	6 months' probation [9]											
Cincinnati, Ohio	55	2,200	55	2,100	[10] 4	2,000		60	2,000			3,540	3,000	1	2,450	7	2,180	
					282	1,860	After 3 years	8	1,950	44	1,920			3	2,280	1	1,920	
					34	1,740	Third year [11]											
					20	1,620	Second year [11]											
					38	1,500	First year [11]											
Cleveland, Ohio	64	2,746	107	2,614	723	2,420	After 3 years	39	2,725					10	2,614	3	2,614	
					0	2,200	Third year [12]									4	(13)	
					1	2,070	Second year [12]											
					0	1,800	First year [12]											
Columbus, Ohio	37	2,220	17	2,040	289	1,920				(1)		2,880		5	1,980	8	1,980	
Dallas, Tex	66	1,890			232	1,740	After 1 year	46	1,890	(1)		3,600		6	1,800	3	2,220	
					4	1,620	Fourth 3 months											
					4	1,560	Third 3 months											
					2	1,500	Second 3 months											
					2	1,380	First three months											
Dayton, Ohio	12	2,280	30	2,100	129	1,920	After 1 year					2,700	2,280	6	2,040	3	2,100	
					0	1,860	Second 6 months											
					26	1,800	First 6 months [14]											
Denver, Colo	31	2,160	35	2,040	212	1,920	After 3 years	34	2,040			2,580	2,160	7	1,920	11	1,920	
					26	1,860	Third year											
					14	1,800	Second year											
					19	1,740	First year satisfactorily											
Des Moines, Iowa	10	2,280	26	2,100	125	1,920	After 1 year			6	1,920	2,280		4	1,920			
					13	1,740	First year											
Detroit, Mich	96	3,180	100	2,880	1,154	2,520	After 15 months	114	2,700	(1)		4,740	3,780	5	2,640	20	3,504	
					74	2,200	Next 9 months							3	2,580			
					6	2,100	First 6 months											
Duluth, Minn	7	2,130	15	2,100	63	1,920	After 4 years			32	1,950	2,580		3	1,620	2	2,100	
					4	1,860	Fourth year											
					3	1,800	Third year											
					8	1,740	Second year											
					6	1,620	First year											
El Paso, Tex	12	2,040	12	1,980	27	1,800	After 2 years	6	1,860	8	1,860	2,340		3	1,800			
					4	1,680	Second year											
					14	1,560	First year											
Erie, Pa	12	2,160	12	2,100	57	1,920	After 5 years			28	1,980	2,600	2,120	4	1,440			
					2	1,865	Fifth year						1,800					
					3	1,800	Fourth year											
					2	1,740	Third year											
					4	1,680	Second year											
					4	1,620	First year											
Fall River, Mass	17	2,358	17	2,157	145	2,008	After 1 year					2,700		6	2,008	2	2,008	
					3	1,600	First year [11]											

(Footnotes at end of section B of table)

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section B—Continued

City and State	Captains		Lieutenants		Privates (firemen)			Engineers (pumpers)		Drivers and chauffeurs		Superintendent of fire-alarm	Assistant superintendent of fire alarm	Fire-alarm operators		Electricians or fire-alarm linemen	
	Number	Salary	Number	Salary	Number	Salary	Classification	Number	Salary	Number	Salary			Number	Salary	Number	Salary
Flint, Mich	8	$2,620	12	$2,320	89	$2,160	(15)			26	$2,220	$2,620		3	$2,160	1	$2,560
					5	1,920										1	2,320
Fort Wayne, Ind	22	1,980	4	1,890	70	1,800	After 1 year			44	1,800	2,580	$2,280	3	1,800	4	2,100
					10	1,450	First year										
Fort Worth, Texas	21	1,920	25	1,740	166	1,620	After 2 years					3,300		3	1,740		
					19	1,500	Second year										
					5	1,380	Second 6 months										
					10	1,260	First 6 months										
Grand Rapids, Mich	18	2,008	20	1,916	165	1,825	After 2 years	12	$1,916	4	1,825	2,773	2,194	3	2,008	4	1,825
					15	1,643	Second year										
					5	1,551	First year										
Hartford, Conn	28	2,500	17	2,375	185	2,200	After 1 year	28	2,350			3,500	3,000	6	2,300	4	2,200
					1	2,000	First year [11]										
Houston, Tex	14	1,800			136	1,470	After 18 months			81	1,590	3,600		4	1,800		
	34	1,680			18	1,380	Third 6 months									4	3,285
					30	1,320	Second 6 months										
					31	1,260	First 6 months										
Indianapolis, Ind	42	2,493	72	2,293	302	2,026				115	2,093	3,600	2,693	11	2,026		
Jacksonville, Fla	12	2,400	2	2,250	2	2,160	15 years and over	1	2,190	2	2,070	4,200				1	2,220
	5	2,310	10	2,160	15	2,070	10 to 15 years	4	2,100	3	1,980						
			5	2,070	17	1,980	5 to 10 years	13	2,010	1	1,890						
					43	1,890	After 18 months to 5 years	4	1,920								
					4	1,830	Third 6 months										
					4	1,740	Second 6 months										
					8	1,650	First 6 months										
Jersey City, N. J	69	3,200			427	2,500	After 3 years					4,900	3,700	3	2,400	6	2,400
					30	2,100	Third year										
					0	2,100	Second year										
					0	2,100	First year										
Kansas City, Kans	33	2,160			78	1,980	After 2 years	4	2,160	23	1,980						
					1	1,860	Second year										
					1	1,800	First year										
Kansas City, Mo	39	2,010	39	1,860	174	1,740				100	1,800	3,000		9	2,010	2	2,010
					54	1,680	(16)										
Knoxville, Tenn	28	2,046			43	1,800	After 3 years			28	1,914	2,400		2	1,800		
					8	1,710	Third year [17]										
					8	1,620	Second year [17]										
					7	1,560	First year [17]										
Long Beach, Calif	11	2,700	14	2,700	70	2,400	After 3 years	22	2,580	16	2,460	(15)				1	2,580
					9	2,340	Third year										

Long Beach, Calif	11	2,700	14	2,700	70	2,400	After 3 years	22	2,580	16	2,460	(15)				1	2,580
					9	2,340	Third year											
					13	2,220	Second year											
					24	2,070	First year											
Los Angeles, Calif	211	3,000			834	2,400	After 3 years	153	2,700	179	2,580	3,600	2,760	9	2,400	11	2,574
					36	2,280	Third year									12	2,496
					32	2,160	Second year										
					182	2,040	First year										
Louisville, Ky	31	2,000	33	1,716	133	1,643	After 2 years	22	1,716			3,500		4	1,599	7	2,190
					22	1,551	Second year	1	1,624					4	1,799		
					35	1,460	First year										
Lowell, Mass	19	2,037	19	1,935	205	1,825	After 2 years	2	1,935	2	1,825	2,500				2	1,955
					0	1,643	Second year										
					5	1,460	First year										
Lynn, Mass	17	2,500	17	2,250	122	2,000	After 2 years	9	2,035	(1)		3,000	2,600	4	2,000	3	2,100
					8	1,900	Second year										
					1	1,800	First year										
Memphis, Tenn	44	2,100	42	1,860	140	1,680	After 1 year	44	1,740	5	1,680	2,400	[19] 1,980	6	1,680		
					10	1,500	First year										
Miami, Fla.[18]	11	2,400	16	2,280	100	2,160	After 2 years	4	2,220					3	2,160		
					5	2,040	Second year										
					8	1,920	First year										
Milwaukee, Wis	43	2,420	50	2,280	382	2,040	After 2 years	34	2,280	22	2,040	(20)		9	2,040		
					47	1,980	Second year										
					39	1,920	First year										
Minneapolis, Minn	51	2,280	44	2,220	232	2,040	After 2 years	7	2,160	93	2,100	3,180	2,580	8	2,220	6	2,220
					32	1,920	Second year										
					11	1,800	First year										
Nashville, Tenn	18	2,160	18	2,100	108	1,920		18	2,100	3	1,980	2,760	2,280			1	2,100
Newark, N. J	93	3,200			592	2,500	After 4 years					5,000	3,020	8	2,500	8	2,500
					40	2,400	Fourth year										
					32	2,300	Third year										
					37	2,200	Second year										
					15	2,100	First year										
New Bedford, Mass	16	2,442	16	2,289	129	2,008	After 1 year			36	2,128		2,750	5	2,289	1	2,289
					2	1,847	Second 6 months										
					2	1,708	First 6 months										
New Haven, Conn	33	2,473	5	2,199	229	2,108	After 2 years	1	2,199			3,000	2,564	7	2,108	5	2,290
	10	2,290			24	1,916	Second year										
					2	1,825	First year										
New York, N. Y	336	4,000	529	3,400	4,345	2,500	After 3 years	160	2,920			6,300	5,460	64	3,000	35	2,500
					374	1,980	Third year						4,980				
					236	1,769	Second year						4,080				
					158	1,769	Next 9 months						3,840				
					236	1,769	First 3 months										
New Orleans, La	116	2,084	108	2,016	298	1,884		10	2,109	116	1,959	(20)	(20)				
Norfolk, Va	41	2,190			180	1,890	After 3 years	26	2,004			(20)	(20)	3	1,890	(20)	
					8	1,730	Third year										
					6	1,620	Second year										
					0	1,620	First year										

(Footnotes at end of section B of table)

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section B—Continued

City and State	Captains		Lieutenants		Privates (firemen)			Engineers (pumpers)		Drivers and chauffeurs		Superintendent of fire-alarm	Assistant superintendent of fire-alarm	Fire-alarm operators		Electricians or fire-alarm linemen	
	Number	Salary	Number	Salary	Number	Salary	Classification	Number	Salary	Number	Salary			Number	Salary	Number	Salary
Oakland, Calif.	32	$2,820	31	$2,670	231	$2,400	After 2 years	47	$2,640	10	$2,520	$3,900		8	$2,580	3	$2,580
					4	2,280	Second year										
					10	2,160	First year										
Oklahoma City, Okla.	14	2,100	24	1,980	16	1,800	After 18 months	30	1,920	16	1,860	2,400	$2,100	4	1,800	6	1,800
					9	1,620	Third 6 months										
					6	1,500	Second 6 months										
					34	1,200	First 6 months										
Omaha, Nebr.	29	2,460			276	2,160	After 3 years			(1)		(21)	(21)	(21)		(21)	
	29	2,310			12	2,040	Third year										
					6	1,920	Second year										
					0	1,800	First year										
Paterson, N. J.	34	2,500			139	2,300	After 4 years	20	2,325	7	2,400	2,800		3	2,300	2	2,300
					11	2,200	Fourth year										
					6	2,100	Third year										
					8	2,000	Second year										
					15	1,900	First year										
Philadelphia, Pa.	106	2,250	106	2,150	1,606	[17] 2,008	After 2 years	41	2,050			(6)	(6)	(6)		(6)	
					34	[17] 1,825	Second year										
					145	1,643	First year										
Pittsburgh, Pa.	128	2,460			556	2,040	After 2 years	98	2,220	86	2,124	3,760	2,940	10	2,310	15	1,800
					7	1,920	Second year			19	2,040						
					21	1,800	First year										
Portland, Oreg.	42	2,640			287	2,232	After 2½ years	27	2,700	2	2,232	3,600		3	2,400	2	2,400
	57	2,496			0	2,160	Fifth 6 months	27	2,232					3	2,232		
					24	2,100	Fourth 6 months										
					0	2,040	Third 6 months										
					0	1,980	Second 6 months										
					18	1,920	First 6 months										
Providence, R. I.	40	2,503	39	2,302	364	2,102	After 18 months			(1)		4,000	(22)	(1)		(1)	
					2	2,002	Third 6 months										
					2	1,902	Second 6 months										
					28	1,802	First 6 months										
Reading, Pa.	(23)		(23)		(23)			(23)		(23)		2,400				2	1,640
Richmond, Va.	22	1,920			210	1,620	(15)	33	1,800	3	1,620	3,120	2,760	3	1,920	5	1,740
	24	1,860			11	1,500											
					9	1,380											
Rochester, N. Y.	37	2,600	37	2,400	422	2,100						3,500	2,800	16	2,000		

St. Louis, Mo	81	2,520	81	2,280	566	2,160		56	2,280	50	2,160	4,260	2,820	4	2,160	10	(34)
														4	1,860		
														4	1,560		
St. Paul, Minn	71	2,083			262	1,838		43	1,961	59	1,838	2,677	2,472	5	2,104	5	2,104
													2,196				
Salt Lake City, Utah	8	2,160	11	2,040	73	1,860	After 2 years					2,520		4	1,860	1	1,860
					6	1,740	Second year										
					6	1,620	First year										
San Antonio, Tex	17	1,740			178	1,500		1	1,560	30	1,560	3,000	[19] 2,280	3	1,920	4	• 2,280
	21	1,620															
San Diego, Calif	16	2,520	28	2,460	33	2,220	After 3 years	28	2,400	16	2,340	(16)	3,000	5	2,340	2	2,460
					5	2,100	Third year										
					18	1,980	Second year										
					9	1,800	90 days to 1 year										
					7	1,620	First 90 days										
San Francisco, Calif	80	2,820	141	2,670	732	2,400	(18)	25	2,640	26	2,520	5,000	3,600	8	2,700	14	2,580
					88	2,280											
					28	2,160											
Scranton, Pa	15	2,040	21	1,980	145	1,920	After 3 years	14	1,980	34	1,920	2,400		3	1,260		
					7	1,800	Third year							1	1,200		
					2	1,680	First 2 years										
Seattle, Wash	52	2,640	53	2,400	422	2,160	After 38 months			(1)		3,600	[25] 3,020	3	2,640	5	2,400
					30	2,100	Next 12 months [26]							3	2,400		
					34	2,040	do [26]										
					27	1,920	First 14 months [26]										
Somerville, Mass	7	2,750	15	2,500	99	2,190	After 2 years			3	2,190	3,300	2,190	3	2,008	3	2,190
					10	1,971	Second year										
					4	1,770	First year										
Spokane, Wash	16	1,992	26	1,860	117	1,800	After 2 years	3	1,932	(1)				(1)		2	1,860
					0	1,662	Second year										
					4	1,512	First year										
Springfield, Mass	22	2,701	23	2,500	269	2,190	(27)	3	2,263			3,739	2,701	6	2,190	3	2,190
					2	2,081	(27)										
					2	1,953	(27)										
Syracuse, N. Y	29	2,220	30	2,200	187	2,040	After 4 years	7	2,170	2	2,000	2,740		8	2,000	7	2,000
					25	1,980	Fourth year										
					46	1,920	Third year										
					60	1,860	Second year										
					5	1,800	First year										
Tacoma, Wash	17	2,280	18	2,160	100	2,040	(29)	(19)				2,640		7	2,040	3	2,520
					3	1,920											
					20	1,800											
Toledo, Ohio	30	2,730	34	2,610	314	2,400		14	2,560			3,900	3,300	4	2,730	7	2,784
														4	2,610		
Trenton, N. J	14	2,800	14	2,700	149	2,400	After 5 years			(1)		4,000	3,000	4	2,000	1	2,600
					5	2,300	Fifth year						2,900			1	2,200
					6	2,200	Fourth year										
					4	2,100	Third year										
					18	2,000	Second year										
					11	1,950	First year										

(Footnotes at end of section B of table)

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section B—Continued

City and State	Captains		Lieutenants		Privates (firemen)			Engineers (pumpers)		Drivers and chauffeurs		Superintendent of fire-alarm	Assistant superintendent of fire-alarm	Fire-alarm operators		Electricians or fire-alarm linemen	
	Number	Salary	Number	Salary	Number	Salary	Classification	Number	Salary	Number	Salary			Number	Salary	Number	Salary
Tulsa, Okla	12	$2,700			47	$2,400	After 2 years			12	$2,580	$3,000	$2,880	6	$2,400	2	$2,400
	12	2,640			7	2,040	Second year			12	2,520						
					15	1,800	First year										
Utica, N. Y	15	2,300	15	$2,200	103	2,000	After 3 years	6	$2,050	1	1,600	2,300	2,050	3	2,000	2	1,950
					3	1,850	Third year										
					5	1,700	Second year										
					10	1,550	First year [28]										
Washington, D. C	45	2,500	49	2,350	613	2,100	After 2 years			(1)		3,400	2,400	4	1,920	2	2,599
					35	1,900	Second year [29]										
					33	1,800	First year [29]										
Wilmington, Del	12	2,090	12	1,980	112	1,650		18	1,760			([30])	([16])				
Worcester, Mass	59	2,750	9	2,550	258	2,184	After 1 year			(1)		3,250	2,850	4	2,421	4	2,340
					12	2,002	First year										
Yonkers, N. Y	16	3,300	17	2,800	106	2,500	After 3 years			(1)						1	2,500
					2	2,300	Third year										
					7	2,100	Second year										
					23	1,940	First year										
Youngstown	22	2,240			79	2,040	After 1 year	22	2,220			2,240	2,040			1	1,980
					1	1,800	First year										

[1] Privates detailed.
[2] Principal operators.
[3] Assistant operators.
[4] City electrician.
[5] Assistant city electrician.
[6] Under electrical bureau.
[7] Telephone operators act.
[8] Signal engineer.
[9] Promoted upon recommendation of captain.
[10] Former steam engineers assigned as privates.
[11] And an efficient record.
[12] Promotions are made by physical and mental tests and time service.
[13] Union linemen at $1.37½ per hour.
[14] At end of first 6 months must pass an examination for promotion.
[15] Classification not reported.
[16] Promotions made by seniority when vacancies occur.
[17] Promotions made upon chief's recommendation.
[18] Chief of department acts.
[19] 2 at this rate.
[20] Not under jurisdiction of fire department.
[21] Service supplied by telephone company.
[22] Captain acts.
[23] Volunteers.
[24] 90 cents per hour.
[25] Foreman of fire alarm.
[26] First grade must make 80 per cent and the next two grades 85 per cent efficiency before promotion.
[27] All promotions made by vote of the board of fire chiefs.
[28] Promotion is made Jan. 1 after the first year.
[29] Promotions are made by efficiency tests.
[30] Under police bureau.

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Contd.

Section C

Occupation and city	Number	Annual salary
Accountants:		
Cincinnati, Ohio	1	$2,460
Los Angeles, Calif	1	1,980
Adjutant to chief:		
Seattle, Wash	1	2,640
Arson investigator:		
Houston, Tex	1	1,770
Auto mechanics:		
Buffalo, N. Y	4	2,250
Cincinnati, Ohio	5	1,940
Cleveland, Ohio	11	(1)
Lowell, Mass	2	2,245
Lynn, Mass	1	2,650
Miami, Fla	2	2,400
Milwaukee, Wis	3	2,160
Minneapolis, Minn	1	2,460
	3	2,160
Autogenous welders:		
Chicago, Ill	1	3,900
Auto trimmer:		
St. Paul, Minn	1	1,978
Band instructor:		
New Orleans, La	1	1,884
Battery men:		
Buffalo, N. Y	1	2,370
Los Angeles, Calif	1	2,496
New Bedford, Mass	1	2,128
Blacksmiths:		
Baltimore, Md	2	1,950
Buffalo, N. Y	2	2,250
Chicago, Ill	1	4,740
	1	4,380
	[2] 2	4,015
Miami, Fla	1	2,280
Milwaukee, Wis	1	2,040
Minneapolis, Minn	2	2,160
Portland, Oreg	1	2,640
San Diego, Calif	[3] 1	1,880
Blacksmiths, finishers, vehicle:		
Chicago, Ill	1	4,563
	6	4,198
Boiler makers:		
Baltimore, Md	1	1,800
Chicago, Ill	1	4,745
	[2] 2	4,453
Bookkeepers:		
Albany, N. Y	1	1,500
Springfield, Mass	1	1,799
Box tester:		
Buffalo, N. Y	1	2,250
Brass molders:		
Chicago, Ill	1	4,015
	1	3,650
Cable foremen:		
Kansas City, Mo	1	2,400
Los Angeles, Calif	1	2,640
Cable splicers:		
Boston, Mass	4	2,372
Buffalo, N. Y	1	2,490
Cleveland, Ohio	1	(4)
Kansas City, Mo	1	2,010
Los Angeles, Calif	1	2,574
Rochester, N. Y	2	2,000
Cable splicers and helpers:		
Buffalo, N. Y		2,250
Cleveland, Ohio	1	(5)
Los Angeles, Calif	1	1,482
Captain, special duty:		
Los Angeles, Calif	1	2,700
Carpenters:		
Bridgeport, Conn	1	3,000
	[6] 1	2,500
Buffalo, N. Y	2	2,250
Chicago, Ill	4	4,563
Denver, Colo	1	1,920
Kansas City, Mo	1	1,860
Carpenters—Continued.		
Miami, Fla	1	$2,280
Milwaukee, Wis	3	2,040
New Orleans, La	1	2,084
San Antonio, Tex	1	1,920
	[6] 1	1,620
Syracuse, N. Y	1	2,240
Chauffeur-repairman:		
Buffalo, N. Y	1	2,250
Chemist:		
Jersey City, N. J	1	3,200
Clerks:		
Baltimore, Md	1	2,000
Boston, Mass	2	2,800
	1	2,400
	1	2,100
	3	2,000
	2	1,900
	1	1,800
	1	1,700
	1	1,600
	1	1,500
	2	1,400
	1	1,300
	2	1,200
Bridgeport, Conn	1	3,500
Buffalo, N. Y	1	2,250
Camden, N. J	1	1,920
Canton, Ohio	1	2,500
Chicago, Ill	[7] 1	4,500
	1	3,440
	1	3,200
	1	3,080
	1	2,720
	1	2,480
	1	2,240
	2	2,060
	2	1,980
	1	1,860
	1	1,740
	3	1,500
	1	1,440
	1	1,200
Columbus, Ohio	1	1,920
Dayton, Ohio	1	1,920
Detroit, Mich	3	2,460
Houston, Tex	1	1,680
Jersey City, N. J	[7] 1	3,900
	1	3,400
Kansas City, Mo	4	1,800
Los Angeles, Calif	1	1,920
	1	1,740
	3	1,680
	2	1,500
Lynn, Mass	1	1,460
Milwaukee, Wis	[8] 1	2,040
	1	1,920
Minneapolis, Minn	1	2,500
	1	2,340
	1	2,280
	1	1,800
Newark, N. J	1	2,800
New Bedford, Mass	1	1,825
New Haven, Conn	1	1,700
New Orleans, La	3	2,724
New York, N. Y	1	3,100
Norfolk, Va	1	1,890
Philadelphia, Pa	1	1,350
Pittsburgh, Pa	1	2,040
	1	1,800
Portland, Oreg	1	1,800
Providence, R. I	1	1,430
	1	1,274
Richmond, Va	1	1,620
Rochester, N. Y	1	1,800
St. Paul, Minn	1	1,890

[1] $1.10 per hour. [2] Fireman detailed. [3] $1.12½ per hour. [7] Assistant chief clerk.
[4] Helpers. [5] $1.50 per hour. [6] Assistant. [8] Stock clerk.

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section C—Continued

Occupation and city	Number	Annual salary
Clerks—Continued.		
San Antonio, Tex	1	$1,800
San Diego, Calif	1	2,220
San Francisco, Calif	1	1,800
Seattle, Wash	[9] 1	1,620
Springfield, Mass	1	2,008
Utica, N. Y	1	2,000
Washington, D. C	[7] 1	2,000
Worcester, Mass	1	2,184
Yonkers, N. Y	1	2,600
Draftsmen:		
Chicago, Ill	1	2,640
Long Beach, Calif	1	2,580
Los Angeles, Calif	1	2,400
Drill instructors:		
Buffalo, N. Y	1	3,500
Chicago, Ill	[10] 1	5,300
Cincinnati, Ohio	1	3,000
Des Moines, Iowa	1	2,100
Fort Worth, Tex	1	2,340
Long Beach, Calif	1	3,000
Milwaukee, Wis	1	3,120
St. Paul, Minn	[11] 1	2,046
Syracuse, N. Y	1	2,640
Trenton, N. J	1	2,800
Drill instructor, assistant:		
Cincinnati, Ohio	1	2,200
Electricians, chief:		
St. Paul, Minn	1	2,196
Spokane, Wash	1	2,415
Yonkers, N. Y	1	3,000
Youngstown, Ohio	1	2,100
Elevator operator:		
Buffalo, N. Y	1	2,250
Engineers, assistant:		
Akron, Ohio	4	2,142
Albany, N. Y	4	1,800
Baltimore, Md	76	1,800
Birmingham, Ala	3	2,280
Bridgeport, Conn	11	2,400
Cambridge, Mass	3	2,433
Cleveland, Ohio	37	2,576
El Paso, Tex	6	1,800
Grand Rapids, Mich	12	1,825
Milwaukee, Wis	34	2,160
Minneapolis, Minn	12	2,100
Nashville, Tenn	18	2,040
St. Louis, Mo	56	2,160
Scranton, Pa	14	1,920
Toledo, Ohio	15	2,480
Engineer, automatic service:		
Chicago, Ill	1	4,080
Engineers in charge:		
Boston	3	2,500
Engineer, motor apparatus:		
Boston, Mass	1	3,000
Engineer, motor apparatus, assistants:		
Boston, Mass	2	2,600
Engineers, motor squad:		
Boston, Mass	13	2,300
Engineer, special duty:		
Los Angeles, Calif	1	3,600
Engineer, supervising:		
Albany, N. Y	1	2,400
Chicago, Ill	1	4,080
Enginemen, head:		
Baltimore, Md	2	1,950
Fire-alarm operators, chief:		
Boston, Mass	1	3,000
Chicago, Ill	1	4,500
Kansas City, Mo	1	2,100
Los Angeles, Calif	1	2,520
Fire-alarm operators, chief—Con.		
Miami, Fla	1	$2,400
Milwaukee, Wis	1	2,160
Portland, Oreg	1	2,640
St. Paul, Minn	1	2,104
San Diego, Calif	1	2,520
Seattle, Wash	1	3,000
Syracuse, N. Y	1	2,240
Fire consultant:		
Kansas City, Mo	1	3,000
Fire despatchers:		
Philadelphia, Pa	3	1,700
Fire engineer in charge of equipment and maintenance:		
Chicago, Ill	1	4,500
Examiner:		
Chicago, Ill	1	3,600
Fire inspectors:		
Atlanta, Ga	3	2,352
Chicago, Ill	[10] 1	5,000
Dallas, Tex	3	1,740
Dayton, Ohio	3	2,040
Erie, Pa	1	1,980
	1	1,920
Fort Wayne, Ind	1	1,980
Fort Worth, Tex	2	1,800
Jacksonville, Fla	1	2,280
Omaha, Nebr	1	2,460
St. Paul, Minn	7	1,838
Salt Lake City, Utah	1	2,040
San Antonio, Tex	3	1,560
Syracuse, N. Y	1	2,240
Washington, D. C	7	2,160
Wilmington, Del	5	1,650
Youngstown, Ohio	1	2,220
Fire investigator:		
Dallas, Tex	1	1,890
Fire marshals or wardens, assistant:		
Akron, Ohio	1	2,457
Cleveland, Ohio	14	2,818
Dallas, Tex	1	1,890
Dayton, Ohio	1	2,100
Detroit, Mich	1	3,660
Duluth, Minn	1	1,800
Houston, Tex	6	1,500
Long Beach, Calif	1	3,000
Memphis, Tenn	1	2,100
Minneapolis, Minn	6	2,520
New Haven, Conn	1	2,564
	1	2,108
New York, N. Y	2	3,400
	8	3,000
	1	2,800
	2	2,700
	1	2,600
	1	2,200
	5	2,000
San Diego, Calif	1	3,000
San Francisco, Calif	1	([12])
Seattle, Wash	1	3,000
Tulsa, Okla	1	2,640
Washington, D. C	[13] 1	2,500
Fire-prevention engineers:		
Chicago, Ill	[14] 1	5,340
	4	3,120
Fire utility men:		
Cincinnati, Ohio	14	2,160
Foreman, auto repairs:		
Seattle, Wash	1	2,580
Foremen, general shop:		
Boston, Mass	1	3,000
Seattle, Wash	1	3,000

[7] Assistant chief clerk.
[9] Clerk-typist.
[10] Ranks as division fire marshal.
[11] Also acts as bandmaster.
[12] Salary paid by Underwriters Fire Patrol.
[13] Deputy fire marshal.
[14] Chief.

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section C—Continued

Occupation and city	Number	Annual salary
Foremen (or superintendents) construction:		
Boston, Mass	1	$3,300
Buffalo, N. Y	1	2,490
Cleveland, Ohio	1	2,875
Milwaukee, Wis	1	3,000
Foreman, repair shop:		
Milwaukee, Wis	1	2,420
Foremen, supply barn:		
Buffalo, N. Y	2	2,550
Foremen of volunteers:		
Los Angeles, Calif	17	420
Harness makers:		
Buffalo, N. Y	2	2,250
High-pressure system, chief engineer:		
Jacksonville, Fla	1	2,340
High-pressure system, assistant engineer:		
Jacksonville, Fla	1	2,250
High-pressure system, foreman:		
San Francisco, Calif	1	2,880
High-pressure system, assistant foreman:		
San Francisco, Calif	1	2,730
High-pressure system, supervisors:		
Boston, Mass	1	3,000
San Francisco, Calif	1	4,200
Hydrant inspectors:		
Bridgeport, Conn	1	3,000
Portland, Oreg	1	2,232
Hydrant men:		
Dayton, Ohio	2	1,920
Los Angeles, Calif	1	2,400
San Francisco, Calif	12	2,580
Inside wiremen:		
Boston, Mass	5	2,373
Rochester, N. Y	2	2,000
Inspectors, apparatus:		
Kansas City, Mo	1	2,400
New Orleans, La	1	1,584
Inspectors, chief:		
New Bedford, Mass	1	2,442
St. Paul, Minn	1	2,415
Inspector, assistant, chief:		
St. Paul, Minn	1	1,978
Inspectors of combustibles and fire risks:		
Jersey City, N. J	1	4,500
	[15] 1	3,500
	[16] 10	2,400
New Orleans	1	2,484
Inspector, fire-alarm box:		
Hartford, Conn	1	2,350
Inspectors, fire prevention:		
Cincinnati, Ohio	2	2,160
	4	2,040
Kansas City, Mo	5	2,010
Milwaukee, Wis	18	2,040
Minneapolis, Minn	10	2,160
Inspector, fire prevention, chief:		
Kansas City, Mo	1	2,700
Janitors:		
Buffalo, N. Y	1	2,370
	[17] 1	1,620
Dayton, Ohio	1	1,200
Los Angeles, Calif	1	1,500
New Haven, Conn	1	2,108
Laborers:		
Buffalo, N. Y	7	1,825
Chicago, Ill	16	2,628
Cleveland, Ohio	5	([18])
Laundresses:		
Trenton, N. J	2	1,300
Leather workers:		
Chicago, Ill	1	$4,380
Lineman, assistant:		
Yonkers, N. Y	1	2,000
Linemen, foremen:		
Chicago, Ill	1	4,200
Columbus, Ohio	1	2,250
Houston, Tex	1	3,468
Los Angeles, Calif	4	2,640
Newark, N. J	1	2,700
Portland, Oreg	1	2,640
San Diego, Calif	1	2,520
Springfield, Mass	1	2,500
Toledo, Ohio	1	3,000
Linemen's helpers:		
Los Angeles, Calif	1	1,482
Yonkers, N. Y	1	2,000
Loss finder:		
New Haven, Conn	1	2,473
Machinists:		
Buffalo, N. Y	1	2,250
Chicago, Ill	1	4,745
	28	4,380
	3	3,900
	[19] 1	3,650
Cleveland, Ohio	1	([1])
Dallas, Tex	1	2,100
	1	2,040
	2	1,390
Dayton, Ohio	1	2,040
Denver, Colo	8	2,160
Long Beach, Calif	2	2,580
Miami, Fla	1	2,280
Milwaukee, Wis	3	2,280
Minneapolis, Minn	7	2,160
New Orleans, La	2	2,259
Portland, Oreg	1	2,640
St. Paul, Minn	1	2,104
San Diego, Calif	1	2,460
Spokane, Wash	1	1,872
Youngstown, Ohio	2	2,220
Masons:		
Bridgeport, Conn	1	3,000
Chicago, Ill	1	4,745
Mechanics:		
Akron, Ohio	1	2,400
Hartford, Conn	4	2,300
Jacksonville, Fla	1	2,190
Kansas City, Mo	2	1,920
	6	1,860
Los Angeles, Calif	11	2,496
Memphis, Tenn	3	2,100
Nashville, Tenn	1	2,100
New Bedford, Mass	1	2,128
New Orleans, La	3	2,084
Oklahoma City, Okla	16	1,920
Omaha, Nebr	4	2,160
Richmond, Va	2	1,800
San Antonio, Tex	2	1,920
Syracuse, N. Y	1	2,240
Mechanics, assistant:		
Akron, Ohio	1	2,211
Syracuse, N. Y	2	2,190
Mechanics' helpers:		
Buffalo, N. Y	1	2,100
St. Paul, Minn	2	1,650
Medical officers:		
Boston, Mass	1	3,500
Chicago, Ill	1	3,000
Cleveland, Ohio	1	3,687
Jacksonville, Fla	[20] 1	600
Milwaukee, Wis	1	1,680
	2	1,060
New Orleans, La	1	1,884

[1] $1.10 per hour.
[15] Deputy.
[16] Assistants.
[17] Female.
[18] 62½ cents to $1 per hour.
[19] Helper.
[20] Serves both fire and police departments.

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section C—Continued

Occupation and city	Number	Annual salary
Painters:		
Baltimore, Md	1	$1,800
Bridgeport, Conn	1	3,000
Buffalo, N. Y	5	2,250
Chicago, Ill	1	5,110
	6	4,745
Cleveland, Ohio	1	2,420
Hartford, Conn	1	2,350
Memphis, Tenn	1	1,980
Miami, Fla	1	2,280
Milwaukee, Wis	2	2,040
Minneapolis, Minn	2	2,160
San Antonio, Tex	1	1,920
	[6] 1	1,620
Spokane, Wash	1	1,872
Syracuse, N. Y	1	2,240
Physical director:		
New Orleans, La	1	904
Plasterers:		
Chicago, Ill	2	4,964
	[2] 2	2,811
Plumbers:		
Bridgeport, Conn	1	2,500
Chicago, Ill	3	4,745
Porter:		
Buffalo, N. Y	1	1,950
Pumping station, chief engineers:		
San Francisco, Calif	2	3,360
Pumping station, assistant engineers:		
San Francisco, Calif	5	2,760
Pumping station, firemen:		
San Francisco, Calif	7	2,340
Repair men:		
Baltimore, Md	6	1,950
Dayton, Ohio	1	2,040
Repair man, hose:		
Milwaukee, Wis	1	2,040
Repair men, hydrant:		
Cincinnati, Ohio	6	2,160
Memphis, Tenn	2	1,680
Portland, Oreg	1	2,232
Repair man, instrument:		
Buffalo, N. Y	1	2,490
Repair man, pipe line:		
Milwaukee, Wis	1	2,040
Repair men, tire:		
Chicago, Ill	1	3,285
Minneapolis, Minn	1	2,160
Repair man, wagon:		
Baltimore, Md	1	1,800
Secretary, assistant:		
Louisville, Ky	1	1,500
Milwaukee, Wis	2	2,520
Sheet-metal workers:		
Chicago, Ill	1	4,745
	2	4,380
	[19] 1	3,285
Minneapolis, Minn	1	2,160
Steam fitters:		
Chicago, Ill	3	4,745
Minneapolis, Minn	1	2,160
Stenographers:		
Baltimore, Md	1	1,800
	1	1,700
Bridgeport, Conn	2	1,560
Buffalo, N. Y	1	2,250
Chicago, Ill	1	2,720
	1	2,480
	1	2,240
	1	2,060
	4	1,620
Cleveland, Ohio	1	2,000
Detroit, Mich	1	1,980
Grand Rapids, Mich	1	1,200
Houston, Tex	1	1,500
Jersey City, N. J	1	3,100
Kansas City, Mo	2	1,800
Los Angeles, Calif	1	1,980
	2	1,740
	1	1,680
	1	1,560
	2	1,500
Milwaukee, Wis	[21] 1	2,040
Newark, N. J	1	2,800
New Haven, Conn	1	1,000
New York, N. Y	1	2,576
	1	2,300
Oakland, Calif	1	1,440
Omaha, Nebr	1	1,500
Philadelphia, Pa	1	1,350
Pittsburgh, Pa	1	1,692
Portland, Oreg	1	1,500
St. Louis, Mo	1	1,518
San Francisco, Calif	1	2,580
Seattle, Wash	3	1,800
Syracuse, N. Y	1	1,500
Washington, D. C	1	2,200
	1	1,620
Worcester, Mass	1	2,002
Stenographer-clerks:		
Buffalo, N. Y	1	2,250
Indianapolis, Ind	1	2,026
Minneapolis, Minn	1	2,100
	1	1,800
Trenton, N. J	1	2,000
Stokers:		
Camden, N. J	11	2,040
Storekeepers:		
Buffalo, N. Y	1	2,250
Chicago, Ill	1	2,120
Cleveland, Ohio	1	2,614
Dayton, Ohio	1	2,100
Los Angeles, Calif	1	1,920
Milwaukee, Wis	1	2,040
New Orleans, La	1	2,064
San Francisco, Calif	1	2,400
Superintendents of buildings:		
Chicago, Ill	1	3,300
Kansas City, Mo	1	2,100
Milwaukee, Wis	1	2,420
Superintendent of construction:		
Cleveland, Ohio	1	2,875
Superintendents of fire-hydrants:		
Akron, Ohio	1	2,520
Cincinnati, Ohio	1	3,000
Dayton, Ohio	1	2,220
Superintendents, fire prevention:		
Cincinnati, Ohio	1	3,540
Milwaukee, Wis	1	3,120
Minneapolis, Minn	1	2,880
	[6] 1	2,520
Richmond, Va	1	3,000
Superintendents of maintenance:		
Boston, Mass	1	4,000
Cincinnati, Ohio	1	3,540
Superintendents of repairs:		
New Orleans, La	1	3,009
St. Paul, Minn	1	2,083
Superintendents of supplies:		
Buffalo, N. Y	1	3,300
	[6] 1	2,250
Supervisor fire-prevention inspectors:		
Cincinnati, Ohio	4	2,280
Kansas City, Mo	1	2,700

[2] Helpers. [6] Assistant. [19] Helper. [21] Reporter.

[1358]

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section C—Continued

Occupation and city	Number	Annual salary
Surgeons:		
Baltimore, Md	2	$2,400
Buffalo, N. Y	1	3,060
San Diego, Calif	[22] 1	1,500
Trenton, N. J	[22] 1	1,200
Yonkers, N. Y	1	2,500
Telephone operators:		
Albany, N. Y	[23] 3	1,800
Baltimore, Md	7	1,700
Buffalo, N. Y	4	2,100
Canton, Ohio	[24] 4	960
Chicago, Ill	7	2,400
	1	1,800
Cincinnati, Ohio	3	1,880
Detroit, Mich	1	2,400
	3	2,280
	1	2,160
Jersey City, N. J	3	2,500
Kansas City, Kans	3	1,200
Los Angeles, Calif	1	1,200
Lowell, Mass	3	1,825
Nashville, Tenn	3	1,440
New York, N. Y	3	1,950
	1	1,900
	3	1,850
	1	1,800
	2	1,750
	9	1,650
	1	1,620
	2	1,560
	2	1,500
Pittsburgh, Pa	11	1,326
San Francisco, Calif	4	1,800
Washington, D. C	3	1,560
Tiller men:		
Atlanta, Ga	6	$2,226
Tinsmith:		
Milwaukee, Wis	1	2,040
Truck drivers:		
Cicinnati, Ohio	1	2,055
Los Angeles, Calif	1	1,716
	1	1,620
Portland, Oreg	1	2,232
Typists:		
Chicago, Ill	2	1,500
	1	1,320
	1	1,200
Cincinnati, Ohio	1	1,080
Upholsterers:		
Milwaukee, Wis	1	2,040
Wagon makers:		
Chicago, Ill	1	4,380
Watchmen:		
Buffalo, N. Y	1	2,250
Cleveland, Ohio	2	1,440
Duluth, Minn	1	450
Kansas City, Kans	1	900
	1	840
St. Louis, Mo	63	1,860
San Francisco, Calif	3	2,040
Wheelwrights:		
Buffalo, N. Y	1	2,250
Chicago, Ill	1	4,745
	1	4,380
Minneapolis, Minn	1	2,160

[22] Part time. [23] Privates detailed. [24] Females.

Section D—Marine fire departments

Occupation and city	Number	Annual salary
Captains:		
Baltimore, Md	4	$2,000
Boston, Mass	3	2,700
Buffalo, N. Y	1	3,000
Detroit, Mich	[1]	
Houston, Tex	2	1,800
Jacksonville, Fla	1	2,640
Milwaukee, Wis	3	2,420
Newark, N. J	[1]	
New York, N. Y	[1]	
Norfolk, Va	2	2,190
Philadelphia, Pa	[1]	
San Diego, Calif	1	2,580
Seattle, Wash	3	2,640
Tacoma, Wash	1	2,280
Washington, D. C	1	2,500
Engineers:		
Baltimore, Md	4	1,965
Boston, Mass	3	2,300
	3	2,200
Buffalo, N. Y	3	2,490
Chicago, Ill	7	3,020
Cleveland, Ohio	1	2,737
	3	[2]
Detroit, Mich	5	3,180
Houston, Tex	1	2,400
Jacksonville, Fla	1	2,400
	1	2,340
Milwaukee, Wis	8	2,280
Newark, N. J	3	3,180
New York, N. Y	[3]	
Engineers—Continued.		
Norfolk, Va	4	$2,004
Philadelphia, Pa	6	2,050
San Diego, Calif	1	2,460
	1	2,400
San Francisco, Calif	9	3,060
Seattle, Wash	6	2,400
Tacoma, Wash	3	2,280
Washington, D. C	2	2,250
Engineers, assistant:		
Boston, Mass	6	2,100
Buffalo, N. Y	5	2,370
Washington, D. C	2	2,150
Engineers, chief:		
Houston, Tex	1	2,520
Seattle, Wash	6	2,640
Engineers, pumping:		
Jasksonville, Fla	2	2,250
Firemen, steam:		
Baltimore, Md	22	1,709
Buffalo, N. Y	7	2,250
Milwaukee, Wis	10	2,160
Newark, N. J	3	3,000
Philadelphia, Pa	12	1,650
Seattle, Wash	10	2,160
Washington, D. C	2	1,800
Lieutenants:		
Buffalo, N. Y	1	2,850
Milwaukee, Wis	3	2,280
San Diego, Calif	1	2,460
Seattle, Wash	3	2,400

[1] Included with captains, Section B, p. 129. [2] $1.25 per hour. [3] Included with land engineers.

SALARIES OF EMPLOYEES OF FIRE DEPARTMENTS OF SPECIFIED CITIES—Continued

Section D—Marine fire departments—Continued

Occupation and city	Number	Annual salary
Machinists:		
Baltimore, Md	1	$1,800
Masters:		
Boston, Mass	6	2,200
Detroit, Mich	5	3,180
Mates:		
Jacksonville, Fla	1	2,370
Los Angeles, Calif	2	2,700
Oilers:		
Seattle, Wash	4	2,160
Pilots:		
Baltimore, Md	10	1,800
Buffalo, N. Y	6	2,610
Chicago, Ill	8	3,200
Cleveland, Ohio	9	2,614
Houston, Tex	2	2,400
Los Angeles, Calif	2	3,000
Milwaukee, Wis	9	2,280
Newark, N. J	3	3,000
New York, N. Y	24	3,000
Norfolk, Va	2	2,160
Philadelphia, Pa	6	2,000
Pilots—Continued.		
Portland, Oreg	6	$2,520
San Francisco, Calif	5	3,060
Seattle, Wash	6	2,400
Tacoma, Wash	3	2,160
Washington, D. C	2	2,250
Pipemen:		
Baltimore, Md	44	1,700
Houston, Tex	10	1,470
	1	1,380
	1	1,260
Jacksonville, Fla	1	1,980
	3	1,890
Milwaukee, Wis	33	2,040
New York, N. Y	(4)	
Norfolk, Va	12	1,890
San Diego, Calif	(5)	
San Francisco, Calif	9	2,460
Seattle, Wash	30	2,160
Tacoma, Wash	7	2,040
Washington, D. C	(5)	

[4] Included with land firemen.

[5] Detailed from privates.

Recent Changes in Wages and Hours of Labor

APPROXIMATELY 13,000 manufacturing establishments report to the Bureau of Labor Statistics each month any changes in wage rates which have taken place in their establishments during the month. These data, information furnished by labor organizations, and other wage changes that have come to the attention of the bureau are given in the present article.

Some 32,943 workers are covered in Table 1. In addition, increases were made in the salaries of about 28,000 municipal employees in the city of New York; these changes are given in a separate article on page 147.

The largest single group of employees affected by wage changes reported in the current month was the municipal employees of New York City, already mentioned, whose salary increases ranged from slightly less than $200 to nearly $300 per annum. The building trades (shown in Table 1, following) had the next largest group; wage increases were reported for nearly 25,000 workers, these increases varying from 38¾ cents per hour for rock drillers in New York City to 2 cents per hour for electrical workers in Cambridge, Mass., most trades receiving about 12½ cents per hour increase.

The prevailing increase in the rate for chauffeurs, teamsters, and drivers was $5 per week; for motion-picture operators, $5 to $15 per week; and for the printing trades, about $2.50 per week.

The 5-day week was gained by approximately 4,000 building-trades workers not reported in the November Review. Among the trades not heretofore covered that are reported as obtaining the 5-day week are bricklayers in Venice, Calif.; electrical workers in Madison, Wis., and St. Louis, Mo.; lathers in Chicago, Ill.; painters in Providence, R. I.; and plasterers in Roxbury, Mass. In most instances the hourly rate was increased enough to offset the loss in earnings; however, no information is available as to the amount of employment to be had. The only decrease reported was for miners and smeltermen in Salt Lake City

TABLE 1.—CURRENT UNION AND OTHER WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY

Industry, occupation, and location	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Bakers, Tacoma, Wash.:		*Per day*	*Per day*		
Foreman, day	June 1	$8.00	$8.50	48	48
Foreman, night	do	9.75	10.25	42	42
Dough mixers and oven men, day	do	7.50	8.00	48	48
Dough mixers, night	do	8.00	8.50	42	42
Oven men, night	do	9.25	9.75	42	42
Machine and bench hands, day	do	7.00	7.50	48	48
Machine and bench hands, night	do	8.75	9.25	42	42
Helpers, first year, day	do	3.50	4.00	48	48
Helpers, first year, night	do	5.25	5.75	42	42
Helpers, second year, day	do	4.00	4.50	48	48
Helpers, second year, night	do	5.75	6.25	42	42
Helpers, over 2 years, day	do	5.00	5.50	48	48
Helpers, over 2 years, night	do	6.75	7.25	42	42
Helpers, over 3 years, day	do	6.00	6.50	48	48
Helpers, over 3 years, night	do	7.75	8.25	42	42
Building trades:		*Per hour*	*Per hour*		
Brick masons, stonemasons, etc.—					
Venice, Calif	Oct. 12	$1.37½	$1.37½	44	40
Carpenters, Wewoka, Okla	Sept. 1	1.00	1.00	48	44
Compressed air and foundation workers, New York City—					
Rock drillers	Oct. —	.80	1.18¾	44	44
Laborers	do	.60	.81¼	44	44
Electrical workers—					
Cambridge, Mass	July 15	.93	.95	44	44
Chicago, Ill	Oct. 1	1.62½	1.70	44	44
Madison, Wis	Aug. 1	1.25	1.40	44	40
St. Louis, Mo	July 15	1.50	1.62½	40	40
Hod carriers, Quincy, Mass	Nov. 19	.62½	.75	44	44
Laborers, St. Louis, Mo	Aug. 1	.93¾	1.00	44	44
Lathers, Chicago, Ill	Oct. 1	1.62½	1.70	44	40
Painters—					
New York City	Oct. 25	1.50	1.65	40	40
Providence, R. I	July 1	1.06¼	1.12½	44	40
Paper hangers, Philadelphia, Pa	Sept. 25	1.12½	1.12½	(1)	44
Plasterers, Roxbury, Mass	Aug. 1	1.50	1.62½	40	40
Plumbing and pipe fitting, Rock Island, Ill	June 1	1.25	1.31¼	44	44
Roofers, Chicago, Ill.—					
Composition	Oct. 1	1.56¼	1.70	44	44
Composition, foremen	do	1.81¼	1.95	44	44
Gravel	do	1.62½	1.70	44	44
Roofers, composition, Portland, Oreg	June 1	1.00	1.12½	44	44
Chauffeurs and teamsters:		*Per week*	*Per week*		
Delivery salesmen, Chicago, Ill	do	$40.00	$42.50	44	44
1-horse truck drivers, New York City	Oct. 16	40.00	45.00	54	54
2-horse truck drivers, New York City	do	42.00	47.00	54	54
7½-ton auto chauffeurs, New York City	do	48.50	53.50	54	54
5-ton auto chauffeurs, New York City	do	46.00	51.00	54	54
4-ton auto chauffeurs, New York City	do	45.00	50.00	54	54
3-ton truck and under, New York City	do	43.00	48.00	54	54
Helpers, New York City	do	40.00	45.00	54	54
Bakery salesmen, Tacoma, Wash	June 1	35.00	40.00	48	48
Clothing: Cloth caps, Los Angeles, Calif.—					
Male workers	Sept. 1	40.00	40.00	44	42
Female workers	do	25.00	25.00	44	42
Metal trades:		*Per hour*	*Per hour*		
Blacksmiths and helpers, St. Louis, Mo	July 1	$0.65½	$0.68	44	44
Do	do	.70	.75	44	44
Do	do	.85½	.88	44	44
Do	do	.90	.95	44	44
Mining: Miners, smeltermen, etc., Salt Lake City, Utah	July 1	*Per day* [2] $6.00	*Per day* [2] $5.75	48	48
Moving-picture operators:		*Per week*	*Per week*		
Buffalo, N. Y.—					
Theater A	Sept. 1	$65.00	$80.00	45	45
Theaters B and C	do	65.00	70.00	45	45
Hornell, N. Y.—					
Theater A	Oct. 12	30.00	40.00	23	23
Do	do	35.00	40.00	23	23
Theater C	do	40.00	40.00	23	23

[1] Unlimited.

[2] Minimum.

TABLE 1.—CURRENT UNION AND OTHER WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY—Continued

Industry, occupation, and location	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Moving-picture operators—Continued.					
Scranton, Pa.—		*Per week*	*Per week*		
Head man on Vitaphone and Movietone	(4)	$47.00	$53.00	[3] 6½	[3] 6
Second man in synchronized houses	(4)	42.00	48.00	[3] 6½	[3] 6
Men in night theaters on sound	(4)	34.00	40.00	[3] 4	[3] 4
Men in night theaters without sound	(4)	(4)	37.00	(4)	[3] 4
Men working without sound, 6½ hours	(4)	(4)	46.00	(4)	[3] 6½
Relief men working without sound, 2½ hours	(4)	(4)	25.00	(4)	[3] 2½
Printing and publishing:					
Compositors and machine operators—					
Anaconda, Mont.—Newspapers	Aug. 12	39.88	44.00	44	44
Lawrence, Kans.—					
Newspapers	July 4	33.00	36.00	44	44
Job work	...do	33.00	36.00	44	44
Milwaukee, Wis.—					
Newspapers, day	Oct. 14	53.00	53.00	48	45
Newspapers, night	...do	58.00	58.00	48	45
Muskegon, Mich.—					
Newspapers, day	Aug. 1	42.00	43.00	48	48
Newspapers, night	...do	44.00	45.00	48	48
Nashville, Tenn.—					
Newspapers, day	Aug. 14	40.50	43.50	48	48
Newspapers, night	...do	43.50	46.50	48	48
Oneida, N. Y.—					
Compositors, newspapers, day	Oct. 1	32.00	40.00	48	44
Machine operators, newspapers, day	...do	32.00	40.00	48	44
Machinist-operators, newspapers, day	...do	35.00	43.00	48	44
Compositors, newspapers, night	...do	35.00	43.00	48	44
Machine operators, newspapers, night	...do	35.00	43.00	48	44
Machinist-operators, newspapers, night	...do	38.00	46.00	48	44
Electrotypers—					
Mount Morris, Ill.—					
Job work, day	July —	50.00	52.80	44	44
Job work, night	...do	53.00	55.80	44	44
Springfield, Ohio—					
Molders, newspapers, day	Oct. 19	47.50	50.00	48	48
Molders, newspapers, night	...do	50.50	53.00	48	48
Finishers, newspapers, day	...do	47.50	50.00	48	48
Finishers, newspapers, night	...do	50.50	53.00	48	48
Branchmen, newspapers, day	...do	44.50	47.00	48	48
Branchmen, newspapers, night	...do	47.50	50.00	48	48
Pressmen—					
New York City, newspapers, day	Sept. 4	56.50	57.50	48	48
New York City, newspapers, night	...do	59.50	60.50	41	41
Stereotypers—					
Butte, Mont., job work	Oct. 1	42.00	46.50	45	45
Mount Morris, Ill., job work, day	July —	50.00	52.80	44	44
Mount Morris, Ill., job work, night	...do	53.00	55.80	44	44
New Brunswick, N. J., job work	June 1	47.66⅔	48.58⅓	44	44
Omaha, Nebr., newspapers, day	Aug. 1	47.00	47.50	48	48
Omaha, Nebr., newspapers, night	...do	50.00	50.50	48	48
Springfield, Ohio, newspapers, day	Oct. 1	45.00	47.00	48	47
Springfield, Ohio, newspapers, night	...do	48.00	50.00	48	46
Street railway employees:		*Per hour*	*Per hour*		
Boston Mass., motormen	July 1	$0.78½	$0.80	(5)	(5)
Wilmington, Del., motormen, conductors, and bus drivers	Aug. 15	.53–.56–.61.	.56–.59–.64.	(5)	(5)
Telegraphers:					
Fort Worth & Denver City Railway Co.—					
Amarillo Division	June 16	(4)	.57–.81	48	48
Wichita Falls Division	...do	(4)	.59–.89	48	48
Wichita Valley Railway	...do	(4)	.57–.86	48	48
Average, all divisions	...do	.63	.644	48	48
Clinchfield Road	Oct. 1	.54	.56½	48	48
Tennessee Central Railway—					
Ashland City, Tenn., agent-operators	Sept. 16	(4)	.62	48	48
Algood, Tenn.—					
Agents	...do	(4)	[6]155.00	48	48
Operator-clerks	...do	(4)	.61	48	48
Baxter, Tenn., agent-operators	...do	(4)	.62	48	48
Buffalo Valley, Tenn., agent-operators	...do	(4)	.63	48	48

[3] Per day. [4] Not reported. [5] Irregular. [6] Per month.

TABLE 1.—CURRENT UNION AND OTHER WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY—Continued

Industry, occupation, and location	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Telegraphers—Continued.					
Tennessee Central Railway—Continued.		*Per hour*	*Per hour*		
Carthage, Tenn., agent-operators	Sept. 16	[4]	[5]$160.00	48	48
Carthage Junction, Tenn.—					
Agent-operators	do	[4]	.63	48	48
Operator-clerks	do	[4]	.61	48	48
Clarksville, Tenn., operator-clerks	do	[4]	.62	48	48
Cooksville, Tenn.—					
Agents	do	[4]	[5]200.00	48	48
Operator-clerks	do	[4]	.61	48	48
Crab Orchard, Tenn., agent-operators	do	[4]	.64	48	48
Crawford, Tenn., agent-operators	do	[4]	.62	48	48
Crossville, Tenn.—					
Agent-operators	do	[4]	.66	48	48
Operator-clerks	do	[4]	.61	48	48
Davidson, Tenn., agent-operators	do	[4]	.68	48	48
Dispatcher's office, operator-clerks	do	[4]	.75	48	48
Double Springs, Tenn., agents	do	[4]	[5]100.00	48	48
Emory Gap, Tenn., operator-agents	do	[4]	.62	48	48
Hickman, Tenn., agent	do	[4]	[5]70.00	48	48
Isoline, Tenn., agent-operators	do	[4]	.62	48	48
Lancaster, Tenn., agents	do	[4]	[5]93.00	48	48
Lebanon, Tenn.—					
Agents	do	[4]	[5]197.50	48	48
Operator-clerks	do	[4]	.70	48	48
Do	do	[4]	.62	48	48
Mayland, Tenn., agent-operators	do	[4]	.62	48	48
Monterey, Tenn.—					
Agents	do	[4]	[5]175.00	48	48
Operator-clerks	do	[4]	.62	48	48
North Alexandria, Tenn., agent-operators	do	[4]	.63	48	48
Old Hickory, Tenn.—					
Agent-operators	do	[4]	[5]235.00	48	48
Operator-clerks	do	[4]	.61	48	48
Rockwood, Tenn.—					
Operator-clerks	do	[4]	.61	48	48
Agents	do	[4]	[5]195.00	48	48
Shops, Tenn., operator clerks	do	[4]	.62	48	48
Silver Point, Tenn.—					
Operator-clerks	do	[4]	.60	48	48
Agent-operators	do	[4]	.62	48	48
Waldensia, Tenn., agent-operators	do	[4]	.61	48	48
Watertown, Tenn., agent-operators	do	[4]	[5]160.00	48	48
Wilder, Tenn., agent-operators	do	[4]	.62	48	48
Miscellaneous:					
Municipal janitors, watchmen, elevator men, etc.,		*Per month*	*Per month*		
Denver, Colo	Sept. 1	$90.00	$95.00	48	48

[4] Not reported.

[5] Per month.

Wage Changes in Manufacturing Industries

WAGE-RATE INCREASES were reported by 62 establishments in 21 industries during the month ending October 15, 1929. These increases averaged 6.7 per cent and affected 6,778 employees, or 31 per cent of all employees in the establishments concerned.

Wage-rate decreases were reported during the same period by 11 establishments in 8 industries. These decreases averaged 7.3 per cent and affected 1,160 employees, or 61 per cent of all employees in the establishments concerned.

During the last nine months 395 car shops have reported wage-rate increases made to more than 65,000 employees.

TABLE 2.—WAGE ADJUSTMENTS OCCURRING BETWEEN SEPTEMBER 15 AND OCTOBER 15, 1929

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Slaughtering and meat packing	202	2	7.5–7.8	7.6	30	40	(1)
Confectionery	298	1	4.0	4.0	217	93	1
Flour	332	1	10.0	10.0	36	12	(1)
Baking	690	2	1.0–6.7	5.0	64	9	(1)
Cotton goods	486	3	5.0	5.0	774	83	(1)
Silk goods	285	1	10.0	10.0	35	21	(1)
Clothing, men's	320	1	5.0	5.0	50	100	(1)
Foundry and machine-shop products	1,080	5	2.0–9.5	5.8	483	24	(1)
Machine tools	154	3	4.6–9.4	7.0	32	6	(1)
Paper boxes	191	2	1.0–15.0	10.1	43	18	(1)
Printing, book and job	398	4	2.6–9.0	5.4	69	16	(1)
Printing, newspapers	455	11	0.8–6.0	4.4	1,141	35	1
Brick, tile, and terra cotta	637	2	12.0–15.0	13.9	118	100	(1)
Glass	134	1	10.0	10.0	95	9	(1)
Cigars and cigarettes	218	1	10.0	10.0	300	94	1
Automobiles	222	1	3.0	3.0	300	25	(1)
Car building and repairing, steam-railroad	562	12	4.3–7.5	6.7	2,228	96	2
Agricultural implements	87	1	10.0	10.0	454	100	2
Electrical machinery, apparatus, and supplies	200	2	9.1–10.0	9.4	17	8	(1)
Shipbuilding	82	2	8.4–10.0	8.5	124	7	(1)
Radio	42	4	9.0–11.0	9.3	168	3	(1)
			Decreases				
Confectionery	298	1	20.0	20.0	50	74	(1)
Hosiery and knit goods	344	1	5.0	5.0	66	30	(1)
Silk goods	285	1	5.0	5.0	381	100	1
Foundry and machine-shop products	1,080	2	5.0–10.0	9.6	187	48	(1)
Hardware	72	2	10.0	10.0	81	22	(1)
Lumber, sawmills	645	2	5.0–10.0	5.1	290	77	(1)
Printing, book and job	398	1	10.0	10.0	96	100	(1)
Brass, bronze, and copper products	155	1	15.0	15.0	9	90	(1)

[1] Less than one-half of 1 per cent.

Collection of Wage Claims in Massachusetts, 1928

IN the year ending November 30, 1928, noncompliance with the Massachusetts weekly wage payment law continued to furnish the industrial safety division of the State department of labor and industries with a great amount of work.[1] Complaints to police authorities and court officials result in workers, who have not received the wages due them, being advised to have recourse to criminal proceedings. Labor unions and other agencies annually direct many persons to take such action. When the division handles these cases, a representative of the department personally interviews the complainant and examines the data in connection therewith. Where the case warrants, correspondence is begun with the employer and if the amount is not promptly paid, a special investigator of the division makes a personal demand for the amount. Noncompliance with the law is then followed by action in court. There the employee's rights are upheld without his having to pay the costs of such action.

The division's method of dealing with wage claims has proved successful in hundreds of cases during the year under review, in which period 1,600 complaints were investigated. In only 585 cases, however, was it necessary to take court action. The aggregate amount which the employers paid after complaint was filed was $43,711.61. The amounts of wages involved in the individual claims were ordinarily so small that it was unprofitable for the complainant to pay for legal assistance. To the unskilled worker failure to secure the wages due him is a very serious problem.

Many of these wage claimants are unable to speak much English and many are employees of subcontractors doing excavating work for cellars and building foundations. It is not difficult to explain why these employers fail to pay wages at the right time or in the right amount, as in many instances they have no proper business training and are unable to compute costs with accuracy. A great deal of time is consumed by the division in trying to determine these conflicting claims concerning wage rates. Often both parties to the dispute are called into conference and acquainted with the requirements of the weekly wage payment act, the usual result being that the complainant is paid the wages due him. If a settlement can not be reached in this manner, employees are advised by the department to have recourse to the civil court when it is obvious that the case does not come under the criminal law.

Information is also given as to procedure in case of trustee processes or wage assignments. Many cases of this kind are the outcome of relations with establishments selling goods on the installment plan, in which the workers are not able to make the payments agreed upon. Many employers are now making it a practice to discharge workers involved in such cases when efforts are made to enforce payment through these processes. In certain cases the division has aided dismissed employees to find other jobs. At present this work is being done by branch offices in the large industrial districts. Complainants seek this aid regularly and the facts in each case are entered upon division forms, after which the employer is approached

[1] Massachusetts. Department of Labor and Industries. Annual report for the year ending Nov. 30, 1928. Boston [1929?], pp. 47, 48.

by letter. If there is a controversy between the parties, the division takes steps to bring them together, and the usual outcome of such a conference is an agreement. When court action is required an inspector ordinarily conducts the prosecution for the department. Attorneys send their clients who have small sums of money due them to the division's offices, and public-welfare agencies and other organizations counsel many to take advantage of this special service of the division.

Salary Standardization of City Employees in St. Paul, Minn.

AN adjustable salary plan based upon fluctuations in the cost of living, as shown by the index numbers of the United States Bureau of Labor Statistics, was adopted by the City Council of St. Paul, on October 14, 1922. Entrance salaries as of 1916 form the base upon which adjustments are computed to offset the change in cost of living. This method of salary payment is now entering the eighth year of application.

At the time of the passage of the ordinance salaries were revised (see Labor Review, August, 1923, pp. 110–114). Again in 1925 a revision of salaries was undertaken (see Labor Review, March, 1925, pp. 67, 68). In August, 1929, another revision took place, and three salary groups were added, bringing the total number of salary groups to 27. The revised rates as amended to August, 1929, are as follows:

RATE OF WAGES PER MONTH OF GRADED CIVIL-SERVICE EMPLOYEES, ST. PAUL, MINN., AS ADJUSTED IN AUGUST, 1929

Salary group	Basic entrance salary (1916)	Increase to offset cost-of-living increase since 1916	Adjusted entrance rate to Dec. 31, 1930	Salary group	Basic entrance salary (1916)	Increase to offset cost-of-living increase since 1916	Adjusted entrance rate to Dec. 31, 1930
		Per cent				*Per cent*	
No. 1	$32.50	50	$48.75	No. 15	$105.00	42	$149.10
No. 2	40.00	50	60.00	No. 16	110.00	40	154.00
No. 3	45.00	50	67.50	No. 17	115.00	38	158.70
No. 4	50.00	50	75.00	No. 18	125.00	38	172.50
No. 5	55.00	50	82.50	No. 19	135.00	36	183.60
No. 6	60.00	50	90.00	No. 20	150.00	33	199.50
No. 7	65.00	50	97.50	No. 21	175.00	29	225.75
No. 8	70.00	50	105.00	No. 22	185.00	27	234.95
No. 9	75.00	50	112.50	No. 23	200.00	25	250.00
No. 10	80.00	50	120.00	No. 24	225.00	21	272.25
No. 11	85.00	48	125.80	No. 25	250.00	17	292.50
No. 12	90.00	46	131.40	No. 26	300.00	8	324.00
No. 13	95.00	44	136.80	No. 27	375.00	[1]	[1]
No. 14	100.00	42	142.00				

[1] Flat rate. Not entitled to adjusting or seniority increases.

In a letter dated October 23, 1929, J. B. Probst, chief examiner of the civil service bureau of the city of St. Paul, states that there have been few changes in the ordinance since it came into force and that the city has been singularly free from any salary or wage controversies since the adoption of the plan in 1922.

Increase in Municipal Salaries in New York City

BECAUSE of the size and industrial importance of New York City any general wage or salary changes of its employees are of interest. For this reason a presentation of recent changes is herewith given.

A letter from the director of the budget for the city of New York contains the statement that on September 26, 1929, the board of estimate and apportionment adopted resolutions providing funds and modifying salary schedules necessary to put the increases into effect from September 1, 1929.

In his recommendation to the board of estimate and apportionment of the city, the director proposed that, with certain exceptions, increases be granted to all employees now receiving $3,600 or less per year. He stated that he believed this would be preferable to the system of periodic increases proposed in a bill introduced before the board of aldermen.

He stated that his plan would affect approximately 28,000 positions paid at $3,600 or less in the following civil-service classifications: Clerical, exempt, ungraded, inspectional, medical, noncompetitive, legal, attendance, prison, labor, and street cleaning. No increases would, however, be made in the salaries of the following positions falling within these services but not included in the estimated 28,000: (1) Positions for which the rates are governed by section 220 of the labor law; (2) nurses in hospitals, hospital attendants, hospital helpers in the noncompetitive service (these already being provided with periodic salary increases under the budget); and (3) employees of the department of education (who also receive periodic increases). Other services also recommended not to be included were the engineering service, which received "substantial increases" during 1928 and 1929, the police and fire services, which receive periodic increases, and the ferry service, which is governed by section 220 of the labor law.

The director stated:

> There are about 10,000 employees affected in the street-cleaning service and about 18,000 in the combined other services.
>
> To give the combined other services an individual increase of from $150 to $200 a year will cost approximately $3,225,000, or $268,750 a month.
>
> To give the street-cleaning service an increase of about $100 a year will cost approximately $1,026,000, or $85,000 a month.
>
> The total cost would therefore be about $4,250,000, or $354,166 a month.

The resolution adopted by the board of estimate and apportionment approved the plan presented by the director of the budget to readjust the compensation of all employees receiving at present $3,600 a year or less, but excepted the employees in the following departments: Department of education; the colleges; the libraries; the museums and similar institutions; the board of transportation; United States Volunteer Life Saving Corps; the art commission; "such county courts or departments or positions which are mandatory"; positions for which the rates are governed by section 220 of the labor law; nurses in hospitals; hospital attendants; hospital helpers in the noncompetitive service; part-time employees receiving not exceeding $100; and employees receiving maintenance.

The following table shows the present and the adjusted rates:

PRESENT AND ADJUSTED SALARIES OF MUNICIPAL EMPLOYEES IN NEW YORK CITY

Prior compensation	Adjusted rate	Prior compensation	Adjusted rate	Prior compensation	Adjusted rate
$720	$840	$1,681 to $1,710	$1,860	$2,671 to $2,730	$2,880
$721 to $780	900	$1,711 to $1,770	1,920	$2,731 to $2,790	2,940
$781 to $840	960	$1,771 to $1,830	1,980	$2,791 to $2,800	3,000
$841 to $900	1,020	$1,831 to $1,890	2,040	$2,801 to $2,860	3,060
$901 to $960	1,080	$1,891 to $1,950	2,100	$2,861 to $2,920	3,120
$961 to $1,020	1,140	$1,951 to $2,010	2,160	$2,921 to $2,980	3,180
$1,021 to $1,080	1,200	$2,011 to $2,070	2,220	$2,981 to $3,040	3,240
$1,081 to $1,140	1,260	$2,071 to $2,130	2,280	$3,041 to $3,100	3,300
$1,141 to $1,200	1,320	$2,131 to $2,190	2,340	$3,101 to $3,160	3,360
$1,201 to $1,260	1,380	$2,191 to $2,250	2,400	$3,161 to $3,220	3,420
$1,261 to $1,320	1,440	$2,251 to $2,310	2,460	$3,221 to $3,280	3,480
$1,321 to $1,380	1,500	$2,311 to $2,370	2,520	$3,281 to $3,340	3,540
$1,381 to $1,440	1,560	$2,371 to $2,430	2,580	$3,341 to $3,400	3,600
$1,441 to $1,500	1,620	$2,431 to $2,490	2,640	$3,401 to $3,460	3,660
$1,501 to $1,560	1,680	$2,491 to $2,550	2,700	$3,461 to $3,520	3,720
$1,561 to $1,619	1,740	$2,551 to $2,610	2,760	$3,521 to $3,580	3,780
$1,620 to $1,680	1,800	$2,611 to $2,670	2,820	$3,581 to $3,640	3,840

Employees whose annual salary fell within the range of $3,640 but under $3,840 were increased to $3,840.

Night Work Upheld by Cotton Textile Institute

THE Cotton Textile Institute (Inc.) at its annual meeting, October 16, 1929, defeated by a vote of 450 to 145 a proposal to permit participation by the institute in legislative and political questions. The proposal was sponsored by Eben E. Whitman, a woolen and cotton mill operator, who had advocated permanent elimination of night work as a cure for overproduction.

At the meeting were represented mills in the principal cotton-manufacturing sections in the country.

In his address Walker D. Hines, the president of the institute, had pointed out the necessity of correcting overproduction. This may be achieved, he said, "as the mills more and more adjust their production to demand and maintain a proper regard for costs of production."

The action of the institute is interpreted as meaning that "members may continue to operate as in the past with no agreement or legislation to curb overproduction." [1]

International Comparison of Real Wages

SINCE 1924 the International Labor Office has compiled and published quarterly in its International Labor Review comparisons of real wages in various countries. Recently the scope of these statistics has been extended, and the first presentation of the enlarged report appears in the October, 1929, issue of the Interna-

[1] Charlotte (N. C.) Observer, Oct. 17, 1929, p. 1.

tional Labor Review.[1] The International Labor Office states that while the necessity for extending the scope of the data had been recognized from the beginning, it has held the opinion that "satisfactory statistics could be compiled only on the basis of a detailed international inquiry, conducted on the spot by means of visits to the different countries," in order to insure as far as possible the comparability of the wage and price data for those countries. "The credits necessary to establish such an inquiry on a sound basis have not yet been available." However, during recent months "the urgency of effecting some improvements in the statistics has become greater," since they "are being used to an increasing extent by business undertakings in different countries, and the office is frequently asked to supply additional information." Consequently, it decided to attempt to obtain more complete data by means of correspondence with the "competent government departments," although the improvements resulting from correspondence would be somewhat limited.

The statistics published heretofore covered workers in the building, engineering, furniture, and printing and bookbinding industries only. The new comparison includes these industries and in addition representative occupations in electrical installation, electric power distribution, transportation, and the food industry, and workers employed by local authorities. The selection of these additional industries was made in accordance with the principle adopted in choosing the original list, namely, that they be industries and services common to every town.

The commodity budget used to measure the purchasing power of the wages in different countries has also been enlarged, and includes not only additional food items but also the chief items of fuel and light, and soap, but omits rent for which an allowance had been made in the previous commodity budget. The International Labor Office is anxious to include in the budget clothing, rent, and certain other important items of consumption, but inquiries have shown that at present the national statistics for these items are inadequate for purposes of international comparison. "Only by a detailed investigation 'on the spot' would comparative data be likely to be obtained." The commodities now included, however, cover the greater part of the expenditure of a working-class family. In regard to rent, the office states that although rent restriction is now of less importance in most countries than it was a few years ago, "in those countries in which rents are still much restricted and where in consequence the amount spent on housing constitutes only a small percentage of the workers' total expenditure, the worker may be in a more favorable position in relation to workers in other countries than is shown by the indexes based on food, fuel and light, and soap only."

There has likewise been an increase in the number of towns for which wage and price data are obtained.

In previous comparisons six separate series of wage indexes, based on the quantities of the budget items ordinarily consumed in six groups of countries, were published, as well as an average result in which the six separate series were combined into general international indexes. The new comparisons give only the general international

[1] Comparison of real wages in various countries (pp. 580–588).

indexes, since the separate indexes did not differ widely from the general average, and by adopting a single international budget long and detailed calculations are avoided. In the case of several countries the quantities used by the International Labor Office in calculating the international budget are the same as those used for the previous comparisons but for other countries new data have become available. The new international budget is an average of the quantities ordinarily consumed by the workers and their families, so far as information is available, in all the countries covered by the inquiry. It is reported that test calculations showed that "within reasonable limits, variations in the quantities do not involve fundamental changes in the index numbers of real wages in the different countries."

The wage data formerly had been calculated on the basis of a 48-hour week, but the International Labor Office considers that the use of hourly wages is now preferable, which "does not, however, affect the results of international comparisons." It emphasizes that the data are still not fully comparable, since for some towns the figures represent rates of wages and for others, earnings, and, further, that the calculations are still based on the wages of only a few classes of workers, and are representative of the relative levels of real wages in only a few of the large towns in the different countries (in certain cases only one town).

Table 1 shows the various items comprising the commodity budget and the quantity of each item consumed per adult male per week, used as a basis in calculating the wage indexes.

TABLE 1.—COMMODITY BUDGET USED AS BASIS FOR COMPARISON OF REAL WAGES FOR VARIOUS COUNTRIES

Item	Unit	Quantity consumed per adult male per week	Item	Unit	Quantity consumed per adult male per week
White bread	Kilogram	1.88	Cheese	Kilogram	0.09
Rye bread	do	1.80	Milk	Liter	2.22
Flour	do	.82	Eggs	Each	3.00
Oatmeal	do	.11	Rice	Kilogram	.20
Butter	do	.17	Macaroni	do	.03
Margarine	do	.10	Peas	do	.10
Lard	do	.05	Beans	do	.10
Beef	do	.36	Prunes	do	.04
Mutton	do	.10	Salt	do	.02
Pork	do	.10	Salad oil	Liter	.03
Veal	do	.15	Fuel (coal and equivalent)	Kilogram	11.10
Bacon	do	.15	Electricity	Kilowatt	.45
Potatoes	do	2.02	Gas	Cubic meter	1.84
Sugar	do	.41	Paraffin oil	Liter	.22
Coffee	do	.08	Soap	Kilogram	.10
Tea	do	.03			
Cocoa	do	.01			

Table 2 gives index numbers of comparative real wages in various countries, one series being based on food only and the other on food, fuel, light, and soap, the period covered being "generally June–July, 1929." The method of calculating these indexes is similar to that used in the previous comparisons. For each town an unweighted average of the wages of all classes of workers included is calculated, these averages being then combined into a general average "representing, for the chief towns of the country, the wages of the workers

covered." The number of times the average wage in each country will purchase the international budget is ascertained, the figures obtained being converted into indexes on the basis of Great Britain = 100. Account is taken of the price per unit of each commodity comprising the budget as well as of the average quantities consumed by the workers and their families, as measured by the weekly consumption of an adult male per week, shown in Table 1. The cost of the budget in dollars is figured at the current rates of exchange in the different countries. The figures contained in Table 2 are not comparable with similar figures previously published, owing to the changes in scope described in preceding paragraphs.

TABLE 2.—INDEX NUMBERS OF COMPARATIVE REAL WAGES IN THE LARGE TOWNS OF DIFFERENT COUNTRIES, GENERALLY JUNE-JULY, 1929

[Great Britain=100]

Country	Towns covered		General average index numbers	
	Number	Names	Based on food	Based on food, fuel, light, and soap
United States	10	Baltimore, Boston, Chicago, Denver, Los Angeles, New Orleans, New York, Philadelphia, St. Louis, San Francisco.	187	191
Australia	2	Melbourne, Sydney	146	143
Denmark	1	Copenhagen	103	104
Sweden	3	Goteborg, Malmo, Stockholm	102	101
Great Britain	7	Birmingham, Bristol, Glasgow, Leeds, London, Manchester, Newcastle.	100	100
Irish Free State	3	Cork, Dublin, Dundalk	100	98
Netherlands	4	Amsterdam, The Hague, Rotterdam, Utrecht	86	85
France	4	Lyon, Marseilles, Paris, Toulouse	54	53
Spain	4	Barcelona, Bilbao, Madrid, Valencia	47	45
Austria	3	Graz, Linz, Vienna	46	45
Estonia	2	Tallinn, Tartu	42	41
Portugal	1	Lisbon	35	32

It will be noted that, of the countries listed, the United States had the highest level of real wages, the next in line being Australia, followed by Denmark and Sweden, which have the highest real wages of the European countries.

A number of countries for which figures were given in previous comparisons are not represented in the present instance, notably Belgium, Canada, Germany, Italy, Poland, and Czechoslovakia. This perhaps may be accounted for by the fact that special inquiries were necessary in some countries to enable them to comply with the request of the International Labor Office for additional information, and the results of certain of these inquiries were not received in time for inclusion. However, the office states that they will be published in the International Labor Review as soon as they are available.

The index numbers of real wages will be published twice a year instead of quarterly as heretofore.

Principles of Wage Fixation in Australia

THE recent Federal election in Australia was fought on the issue of retaining or abolishing the Commonwealth Court of Conciliation and Arbitration (more briefly termed the "Federal Court"), a fact which lends timeliness to the recent appearance of one of the University of Melbourne's publications, Fixation of Wages in Australia.[1] The author, a barrister and solicitor of the Supreme Court of Victoria, undertook the work for the purpose of bringing together the principles underlying the decisions of the Federal and State bodies dealing with arbitration, and thus affording material for intelligent criticism, condemnation or commendation, as the case might demand, of their awards. A considerable part of the book, however, is devoted to the machinery for dealing with industrial disputes, and here prominence is given to the Federal Court, partly because it is by far the most important industrial tribunal in Australia, and partly because its principles and practices are followed, to a large extent, by the State tribunals.

Composition and Powers of the Federal Court

SECTION 51 (XXXV) of the Federal constitution authorizes Parliament to make laws for the peace, order, and good government of the Commonwealth with respect to conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State. In accordance with this section the Federal Court was established by an act passed in 1904, which has since been amended twelve times, the first amendment having been made in 1909 and the latest in 1928. In its present form the court consists of a chief judge and four associate judges. It exercises arbitral and judicial powers, and has authority to enforce its awards by the infliction of penalties for breach of observance. It handles only disputes between organized bodies, registered according to prescribed rules, and partly as a consequence of this provision, organization is general in Australia.

At the beginning of July, 1928, the number of employees' bodies registered under the act was 151, with a total membership of 769,048. The awards of the court do not, however, cover all the members of organizations of workers. It is quite common for an award not to apply to the Queensland or Western Australian members of an organization. The number of employers' bodies registered was 27, with a total membership of 16,312.

State Arbitral Bodies

EACH of the six Australian States has some industrial tribunal operating in somewhat the same way as the Federal Court, which deals with disputes between organized bodies of workers and employers, and has rather wide powers of fixing wages, hours, and working conditions. All have authority to settle by compulsory arbitration industrial questions on which the parties concerned have failed to reach agreement.

[1] Anderson, George: Fixation of wages in Australia. Melbourne, Macmillan & Co. (Ltd.) and Melbourne University Press, 1929.

Principle of the Living Wage

THE paramount feature of Australian wage fixation is the acceptance of the principle of the basic living wage, the wage below which no able-bodied adult may be called upon to work. The method of fixing this dates back to 1907, when Mr. Justice Higgins, in the so-called Harvester case, found himself obliged to decide whether the wages paid in an applicant's factory were fair and reasonable. At that time there was no recognized standard in Australia of fairness and reasonableness, as applied to wages, and after much consideration he concluded that the only appropriate standard for a living wage must be "the normal needs of the average employee, regarded as a human being living in a civilized community." Since marriage is a normal part of the average employee's life, the wage must provide for the support of a family, and at that time it was assumed that a normal family consisted of the parents and three children under the age of self-support. Cost-of-living figures were lacking, but the justice made inquiries for his own guidance.

> I found that in Melbourne, the city concerned, the average necessary expenditure in 1907 on rent, food and fuel, in a laborer's household of about five persons was £1 12s. 5d.; but that, as these figures did not cover light, clothes, boots, furniture, utensils, rates, life insurance, savings, accident or benefit societies, loss of employment, union pay, books and newspapers, tram or train fares, sewing machine, mangle, school requisites, amusements and holidays, liquors, tobacco, sickness or death, religion or charity, I could not certify that any wages less than 42s. per week for an unskilled laborer would be fair and reasonable.

It was recognized that this estimate was based on scanty data, that the standard of living varies in different places, and that the wage required to support a family in reasonable comfort differs widely with the thrift, ability, and character of the family, but in the absence of any other recognized standard, Mr. Justice Higgins's figures were taken as an index of what the basic wage should be, and have since been applied very generally, with such changes as variations in prices and local circumstances may demand. There has been marked disagreement, however, over the size of the family for which the basic wage should provide. New South Wales fixes the wage at an amount which will care for a man and his wife, and provides for the children by a child endowment scheme; in Western Australia the basis is man, wife, and two children, while in the remaining States, and in the Federal court, the basis is taken to be man, wife, and three children.

The Secondary Wage

THE basic wage is the minimum which may be paid to an unskilled adult worker, unless he is handicapped by some defect or infirmity which reduces his capacity below the normal. For workers of a higher class there is an additional wage based on such skill or other qualifications as may be required by the occupation concerned. The determination of what this wage should be is a difficult matter, discussed at length in various awards. There is no general agreement as to where the line shall be drawn between skill and mere knack or dexterity, nor as to what margin should be allowed for skill in different occupations. In practice the courts are guided by the actual practices and customs prevailing in the different industries, by

existing agreements between employers and employees, by awards already made, by the advice of experts appointed for special cases, and by evidence produced for its consideration. The matter is, however, a thorny one, and the awards often give rise to dissatisfaction.

The position may be summed up in this way: The court is called upon to prescribe margins for skill for different grades of workers in an industry; the prevailing margins for skill are conflicting; the values placed upon the various classes of work by employers and employees are conflicting; assessors as representing conflicting interests are of little help; and the court itself has little or no knowledge of the technicalities of the industry. By what method, then, will the court fix fair margins for skill for the different grades of workers in the industry?

This secondary wage, or margin for skill, is not usually varied according to fluctuations in the cost of living, and seldom for other causes. Neither is it considered as being as important as the basic wage; the latter is not regarded as a matter for bargaining, but as a minimum which must be paid under any conditions, while the margin for skill may be diminished, or even given up temporarily if the circumstances of an industry seem to demand such action.

Other Wage Factors

It is customary for the court, after deciding upon the male basic wage, to add to it 3s., known as "Power's three shillings," from the name of the justice who introduced the custom in 1921. The idea is to give a little elasticity to the awards, so that, if the cost of living rises in the interval between the fixation of a wage and its review, the worker may still receive the equivalent of the Harvester wage. This amount, however, may be disallowed if it can be shown that an industry, or any branch of an industry, or even any large employer, can not pay this addition to the figures of the basic wage, or if employees are receiving special benefits and privileges approximating that amount in money value.

Wage differentials for special occupations are sometimes given when the work involved is especially difficult, dirty, dangerous, disagreeable, or injurious to health. It is usually provided that these differentials shall not be cumulative so as to exceed the maximum of double the ordinary rates.

Women's Wages

The basic wage is founded on the principle that the need of the average worker must be the determining factor in fixing pay, and by accepted custom the court regards the average worker as male, married, and a father. By an equally well-accepted custom, the average female worker is regarded as a single woman having only her own support to consider. Logically, therefore, the court, in fixing women's wages, refuses to be influenced by any such principle as that of equal pay for equal work, or payment for the job regardless of the worker's sex. The question has been argued at length in a number of decisions, and the principle has been clearly laid down that while the basic wage for males must provide for the care of a family, the basic wage for females should provide only for the needs of one.

The living wage [for women] is based on the cost of living of a single woman living away from her home with only herself to support. It provides a fair and

average standard of comfort for the humblest class of female worker; or it is a sum sufficient for the normal and reasonable needs of such a worker.

Various inquiries into the cost of living for women have established, to the satisfaction of the court, that the female basic wage should be about 54 per cent of the male basic wage. This proportion is not invariable, the amount fixed ranging from 50 to 54 per cent, or even higher, in a few cases, according to the circumstances of the special case. Secondary wages, based on special skill or other qualifications, are awarded to women as well as to men, but are usually much smaller than the similar margins for men.

Average Earnings of Workers in Great Britain and Northern Ireland, 1924 and 1928

IN MARCH, 1925, the British Ministry of Labor undertook an investigation into the average earnings and hours of labor of workers in manufacturing industries in Great Britain and Northern Ireland, securing data for selected weeks, one each in January, April, July, and October, 1924. A summary of the results of this investigation was published in the Labor Review for September, 1927. With a view to learning what changes have taken place in the interval, a second inquiry was undertaken, dealing with average earnings in the same industries in October, 1928, and the results secured, so far as they have been tabulated, are given in the Ministry of Labor Gazette for October, 1929. Schedules were sent to a number of the employers who had responded in 1924, asking for particulars on the following points:

1. The total number of workpeople at work in the week ended October 27, 1928, and, so far as possible, the numbers of males and females separately.
2. The total wages paid to these workpeople in that week, showing separately, if possible, the total wages paid to males and to females, respectively.
3. The numbers of workpeople on short time in the same week, and the average number of hours lost, per head, by those workpeople.

The schedules were so worded as to obtain information comparable with that secured in 1924, and were sent to nearly 51,000 employers who had sent in data for the earlier investigation. Replies were received from approximately 40,000, covering 4,000,000 workpeople. Five large groups of industries are dealt with in this first article—textiles; clothing; pottery, brick, glass, chemicals, etc.; food, drink, and tobacco; and paper, printing, etc. The method of handling the material is thus explained:

As the proportions of large and small firms covered by the inquiry of 1928 differ from those of the previous inquiry, the average earnings of the workpeople included in the returns received for October, 1928, can not properly be compared with those of the workpeople covered by the 1924 inquiry unless those variations which arise solely from the differences in the composition of the two groups of returns are eliminated from the comparison. With this object in view, the average earnings shown in the returns received for October, 1928, have been compared with the averages shown in the returns received from the same employers in October, 1924, and the average percentages of increase or decrease in earnings as revealed by this comparison have been computed. These percentages have then been applied, industry by industry, to the average earnings shown by all the returns received for October, 1924, so as to obtain comparable averages for October, 1928.

The resulting statistics are given in the following table, which shows (*a*) the numbers of workpeople employed in October, 1928, by those employers who supplied returns both for October, 1924, and for October, 1928; (*b*) the average percentage increase or decrease in average weekly earnings between the two dates shown by these returns; (*c*) the average weekly earnings in October, 1924, of all workpeople included in the returns received relating to that year; and (*d*) the average weekly earnings in October, 1928, arrived at by applying to the average earnings of all workpeople in October, 1924, the percentage increases or decreases shown by the returns received from those firms who supplied comparable figures for both dates.

TABLE 1.—COMPARATIVE AVERAGE EARNINGS AND NUMBER AFFECTED, 1924 AND 1928, BY INDUSTRY

[Conversion on basis of shilling=24.33 cents; penny=2.03 cents]

Industry	Number employed week ending Oct. 27, 1928	Average earnings in selected week				Per cent of change in weekly earnings
		1924		1928		
		English currency	U. S. currency	English currency	U. S. currency	
Textile		*s.* *d.*		*s.* *d.*		
Cotton	376,390	37 7	$9.14	37 8	$9.17	+0.2
Woolen and worsted	169,691	40 8	9.90	39 5	9.59	−3.1
Lace	8,267	34 1	8.29	37 8	9.17	+10.4
Silk	38,371	39 3	9.55	40 9	9.92	+3.8
Linen	50,078	27 7	6.71	24 11	6.06	−9.6
Jute	31,244	33 3	8.09	35 2	8.56	+5.8
Hosiery	59,387	35 0	8.52	37 4	9.08	+6.6
Carpet	12,525	36 2	8.80	36 2	8.80	------
Bleaching, printing, dyeing, and finishing	78,195	50 3	12.23	49 8	12.09	−1.1
Making-up and packing	7,597	45 0	10.95	47 0	11.44	+4.4
Other textile	31,543	32 0	7.79	32 3	7.85	+.8
Clothing						
Tailoring, custom	5,194	40 3	9.79	41 6	10.10	+3.1
Tailoring, ready-made	63,399	34 4	8.35	34 0	8.27	−1.0
Dressmaking	14,173	29 5	7.16	30 11	7.52	+5.0
Mantle and costume making	11,425	35 3	8.58	34 9	8.46	−1.5
Shirt, blouse, underclothing, etc	35,215	26 10	6.53	28 2	6.85	+4.9
Corset making	6,459	28 6	6.93	30 8	7.46	+7.5
Millinery	4,917	27 10	6.77	31 1	7.56	+11.6
Felt and silk hat making	7,074	43 1	10.48	43 9	10.65	+1.6
Boots and shoes, custom trade and repairing	4,679	48 8	11.84	48 3	11.74	−.8
Boots and shoes, ready-made	71,431	44 5	10.81	42 4	10.30	−4.7
Glove making	3,599	35 8	8.68	39 5	9.59	+10.5
Fur	3,214	52 8	12.82	53 6	13.02	+1.6
Laundries	48,632	29 8	7.22	29 6	7.18	−.6
Dyeing and dry cleaning	9,468	37 6	9.12	37 7	9.14	+.2
Other clothing	37,975	33 5	8.13	33 7	8.17	+.5
Pottery, brick, glass, chemicals, etc.						
Pottery	48,426	40 4	9.81	39 9	9.67	−1.5
Brick, tile, etc	35,548	51 1	12.43	51 2	12.45	+.2
Glass	27,448	50 10	12.37	51 5	12.51	+1.1
Chemical	61,025	52 8	12.82	54 5	13.24	+3.4
Cement	14,144	61 2	14.88	61 5	14.94	+.4
Explosives	7,151	42 9	10.40	45 8	11.11	+6.9
Paint, color, and varnish	9,470	52 0	12.65	52 3	12.71	+.5
Soap, candle, oil, and tallow	21,868	50 6	12.29	51 3	12.47	+1.5
Other chemicals, etc	17,439	46 1	11.21	47 11	11.66	+4.0

TABLE 1.—COMPARATIVE AVERAGE EARNINGS AND NUMBER AFFECTED, 1924 AND 1928, BY INDUSTRY—Continued

Industry	Number employed week ending Oct. 27, 1928	Average earnings in selected week				Per cent of change in weekly earnings
		1924		1928		
		English currency	U. S. currency	English currency	U. S. currency	
Food, drinks, and tobacco		s. d.		s. d.		
Grain milling	15,683	57 3	$13.93	56 8	$13.79	−1.0
Bread baking	37,225	49 0	11.92	47 10	11.64	−2.3
Biscuit manufacture	23,945	39 10	9.69	38 11	9.47	−2.3
Cocoa, chocolate, and sugar candy	53,866	37 4	9.08	37 1	9.02	−.7
Preserved food, jam, and sauce	24,246	35 11	8.74	36 9	8.94	+2.3
Bacon and sausage	6,472	48 2	11.72	45 9	11.13	−5.1
Fish curing	3,921	44 7	10.85	45 10	11.15	+2.8
Sugar refining	9,673	61 0	14.84	65 4	15.90	+7.1
Seed crushing and cattle-food manufacturing	12,569	55 6	13.50	54 8	13.30	−1.5
Brewing, malting, etc	43,924	54 5	13.24	54 0	13.14	−.7
Spirituous drinks	4,587	51 5	12.51	49 10	12.13	−3.1
Aerated waters, cider, etc	7,207	42 1	10.24	42 9	10.40	+1.6
Tobacco	32,174	41 4	10.06	44 6	10.83	+7.7
Other food	9,321	47 2	11.48	47 8	11.60	+1.0
Paper, printing, and bookbinding						
Paper making	35,420	48 9	11.86	51 10	12.61	+6.3
Wall paper	2,998	45 10	11.15	45 11	11.17	+.2
Manufactured stationery	18,347	37 11	9.23	39 2	9.53	+3.3
Cardboard box	12,608	34 2	8.31	34 8	8.44	+1.4
Newspaper printing	30,592	89 3	21.72	90 8	22.06	+1.6
General printing and bookbinding	91,310	53 0	12.90	53 2	12.94	+.3

The changes in the level of average earnings, it will be noticed, are slight, but on the whole, increases are more numerous than decreases, and the greatest changes noted—10.4 per cent in lace manufacture, 10.5 per cent in glove making, and 11.6 per cent in the millinery trade—were all increases. Increases amounting to 5 per cent or more occurred in 11 industries, while decreases of 5 per cent or more were found in only 2 industries—bacon making, sausage curing, etc., which showed a reduction of 5.1 per cent, and the linen industry, in which a decrease of 9.6 per cent had taken place.

Extent of Short-Time Working

SINCE the average earnings are seriously affected by short time, a further table is presented, showing the number of workers in each industry employed in October, 1928, by the firms who made returns for both 1924 and 1928, the percentage of those on short time, and the average number of hours lost by those on short time in the week ending October 27, 1928. Two additional columns give the average number of hours lost through short time in 1924 and in 1928, per person employed by firms reporting for both dates.

TABLE 2.—EXTENT OF SHORT-TIME WORKING, 1924 AND 1928

Industry	Week ending Oct. 27, 1928			Average hours lost per worker employed	
	Number employed	Per cent on short time	Average hours lost by those on short time	Week ending Oct. 18, 1924	Week ending Oct. 27, 1928
Textile					
Cotton	343,205	13.4	12.7	2.4	1.7
Woolen and worsted	163,528	31.3	11.7	2.0	3.7
Lace	6,560	12.9	12.7	5.5	1.6
Silk	28,586	27.0	9.9	1.4	2.7
Linen	48,497	36.4	9.8	.7	3.6
Jute	30,492	1.3	19.0	.1	.2
Hosiery	44,077	10.0	11.6	1.0	1.2
Carpet	10,758	12.8	6.4	.4	.8
Bleaching, printing, dyeing, and finishing	76,154	45.2	11.3	4.0	5.1
Making up and packing	7,500	11.8	15.0	1.0	1.8
Other textile	29,588	21.1	10.3	1.7	2.2
Clothing					
Tailoring, custom	3,559	27.6	14.6	4.0	4.0
Tailoring, ready-made	56,813	41.1	11.4	2.6	4.7
Dressmaking	13,150	8.8	9.9	1.2	.9
Mantle and costume making	10,827	34.0	12.8	2.0	4.4
Shirt, blouse, underclothing	28,766	27.4	9.3	2.4	2.6
Corset making	4,373	17.9	10.8	7.9	1.9
Millinery	4,848	10.9	12.5	.6	1.4
Felt and silk hats	4,848	28.6	12.4	3.3	3.5
Boots and shoes, custom	3,862	14.5	10.6	1.3	1.5
Boots and shoes, ready-made	67,255	50.7	11.9	3.9	6.0
Glove making	2,899	1.2	7.8	2.6	.1
Fur	3,071	1.2	5.4	.1	.1
Dyeing and dry cleaning	9,324	2.4	4.2	.1	.1
Other clothing	33,337	21.1	11.6	1.5	2.4
Pottery, brick, glass, and chemical					
Pottery	39,374	19.1	12.4	1.9	2.4
Brick, tile, etc	31,805	14.0	9.8	.5	1.4
Glass	25,755	5.4	13.4	.3	.7
Chemical	60,567	1.4	9.7	.2	.1
Cement	13,657	1.9	8.1	.3	.2
Explosives	5,671	7.9	11.2	.6	.9
Paint, color, and varnish	9,463	10.5	6.3	.8	.7
Soap, candle, oil, and tallow	21,362	17.0	6.8	1.4	1.2
Other chemical, etc	17,234	24.8	7.7	2.1	1.9
Food, drink, and tobacco					
Grain milling	15,549	.9	11.7	.1	.1
Bread baking	35,318	.9	7.5	.0	.1
Biscuit manufacture	23,775	1.7	5.6	.3	.1
Cocoa, chocolate, and sugar candy	52,126	12.8	10.7	.4	1.4
Preserved food, jam, and sauce	23,496	16.8	6.8	.8	1.1
Bacon and sausage	6,310	1.5	10.3	.1	.2
Fish curing	3,528	4.1	17.5	.6	.7
Sugar refining	9,673	5.6	9.0	1.3	.5
Seed crushing and cattle-food manufacturing	11,755	1.2	16.8	.1	.2
Brewing, etc	43,002	3.5	9.0	.2	.3
Spirituous drinks	4,346	4.8	6.2	.4	.3
Aerated waters, etc	7,000	19.5	9.3	2.1	1.8
Tobacco	31,641	43.2	5.3	4.8	2.3
Other food	9,176	5.4	10.0	.6	.5
Paper, printing, and bookbinding					
Paper making	32,975	4.1	7.2	1.0	.3
Wall paper	2,998			.0	
Manufactured stationery	17,545	2.0	6.5	.3	.1
Cardboard box	11,021	10.7	8.4	1.4	.9
Newspaper printing	29,402	.1	20.6	.0	.0
General printing and bookbinding	87,161	2.5	10.1	.2	.2

The changes in the extent of short time correspond to a considerable degree, though not exactly, with those in average earnings. In several of the important industries the proportion of workers on short time in October, 1928, was high. Thus in the woolen and worsted, linen, bleaching, dyeing, and finishing, ready-made tailoring, mantle and costume making, boot and shoe making, and tobacco industries, the proportion working short time ranged from 31.3 to 50.7 per cent, but the amount of time lost per worker during the week varied considerably. Averaging the time lost over all workers employed by the reporting firms, instead of simply over those on short time, the boot and shoe industry makes the worst showing, with an average loss of six hours per worker. In the woolen and worsted industry the average per capita time lost was 3.7 hours, but for the 31.3 per cent who were on short time the average loss of time was 11.7 hours. These figures are not so high as in some other industries, but the number of employees dealt with (163,528) makes them of special importance. "The greatest increases in average short time between October, 1924, and October, 1928, were in the linen industry, mantle and costume making, ready-made tailoring, and boot and shoe manufacture; the greatest decreases were in the corset, lace, glove, and tobacco industries."

Average Earnings of Males and of Females

THE average earnings in any industry are apt to be affected by the proportion of women employed in it, since women's wages usually range lower than men's. A third table shows the average earnings of men and women separately, so far as these could be ascertained. A considerable number of those reporting did not separate the sexes, and consequently the figures in this table differ from those in the preceding tabulations. The data given here relate only to workers employed by the firms who supplied information for both dates.

TABLE 3.—COMPARATIVE AVERAGE EARNINGS, 1924 AND 1928, BY INDUSTRY AND SEX

Males

[Conversions on basis of shilling=24.33 cents; penny=2.03 cents]

Industry	Number employed week ending Oct. 27, 1928	Average earnings in selected week				Per cent of change in weekly earnings
		1924		1928		
		English currency	U. S. currency	English currency	U. S. currency	
Textile		*s. d.*		*s. d.*		
Cotton	63,284	47 7	$11.58	48 2	$11.72	+1.2
Woolen and worsted	45,617	53 10	13.10	52 1	12.67	−3.3
Silk	14,206	61 0	14.84	62 0	15.09	+1.7
Linen	8,565	41 3	10.04	38 2	9.29	−7.4
Jute	5,924	41 9	10.16	44 8	10.87	+7.0
Hosiery	6,616	55 0	13.38	57 10	14.07	+5.2
Bleaching, printing, dyeing, and finishing	54,692	56 10	13.83	56 3	13.69	−1.0
Clothing						
Boots and shoes, custom trade	3,841	51 6	12.53	51 4	12.49	−.3
Boots and shoes, ready-made	30,653	53 9	13.08	51 0	12.41	−5.1
Laundries	7,208	48 0	11.68	47 9	11.62	−.5

TABLE 3.—COMPARATIVE AVERAGE EARNINGS, 1924 AND 1928, BY INDUSTRY AND SEX—Continued

Males—Continued

Industry	Number employed week ending Oct. 27, 1928	Average earnings in selected week				Per cent of change in weekly earnings
		1924		1928		
		English currency	U. S. currency	English currency	U. S. currency	
Glass, chemical, etc.		*s. d.*		*s. d.*		
Glass	20,830	56 5	$13.73	56 1	$13.65	−0.6
Chemical	47,863	59 10	14.56	61 8	15.01	+3.0
Cement	13,599	61 7	14.98	61 7	14.98	----
Paint, color, and varnish	7,352	54 10	13.34	55 1	13.40	+.4
Food, drink, and tobacco						
Grain milling	13,800	59 3	14.42	58 7	14.25	−1.1
Bread baking	27,284	54 0	13.14	53 0	12.90	−1.9
Biscuit manufacture	5,984	56 9	13.81	57 9	14.05	+1.8
Cocoa, chocolate, and sugar candy	11,281	64 3	15.63	63 1	15.35	−1.8
Preserved food, jam, and sauce	7,061	56 9	13.81	57 3	13.93	+.9
Brewing, etc	35,310	60 2	14.64	59 8	14.52	−.8
Tobacco	7,452	67 7	16.44	72 0	17.52	+6.5
Paper, printing, and bookbinding						
Manufactured stationery	5,187	59 11	14.58	61 7	14.98	+2.8
Newspaper printing	26,774	95 4	23.20	96 5	23.46	+1.1
General printing and bookbinding	40,846	67 10	16.51	68 2	16.59	+.5

Females

Textile		*s. d.*		*s. d.*		
Cotton	109,848	29 2	$7.10	29 1	$7.08	−0.3
Woolen and worsted	65,827	30 11	7.52	30 3	7.36	−2.2
Silk	19,700	27 10	6.77	27 7	6.70	−.9
Linen	25,349	22 10	5.56	20 6	4.99	−10.1
Jute	12,031	28 10	7.02	30 10	7.50	+6.9
Hosiery	32,085	28 10	7.02	30 10	7.50	+6.9
Bleaching, printing, dyeing, and finishing	12,458	27 5	6.67	26 4	6.41	−3.9
Clothing						
Dressmaking	12,761	28 6	6.93	29 10	7.26	+4.8
Millinery	4,456	26 8	6.49	29 9	7.24	+11.6
Shirt, blouse, underclothing, etc	27,425	24 9	6.02	25 8	6.25	+3.7
Boots and shoes, ready-made	21,035	30 1	7.32	29 0	7.06	−3.6
Laundries	35,815	26 2	6.37	25 10	6.29	−1.3
Glass and chemical						
Glass	3,920	23 8	5.76	25 0	6.08	+5.5
Chemical	8,940	24 8	6.00	25 4	6.16	+2.7
Food, drink, and tobacco						
Bread baking	5,769	24 9	6.02	24 5	5.94	−1.3
Biscuit manufacture	13,089	28 7	6.96	28 8	6.98	+.3
Cocoa, chocolate, and sugar candy	29,424	26 8	6.49	27 2	6.61	+1.8
Preserved food, jam, and sauce	13,974	26 7	6.47	26 7	6.47	----
Brewing, etc	6,600	27 10	6.77	27 2	6.61	−2.4
Tobacco	16,618	32 9	7.97	35 4	8.60	+7.9
Paper, printing, and bookbinding						
Manufactured stationery	9,821	26 3	6.39	27 1	6.59	+3.2
Newspaper printing	2,479	34 4	8.35	35 7	8.66	+3.7
General printing and bookbinding	27,139	28 10	7.02	28 10	7.02	----

Among the industries included in the foregoing table, those showing the greatest percentage increase in the average earnings of male workpeople between October, 1924, and October, 1928, were hosiery manufacture (5.2 per cent), the tobacco industry (6.5 per cent), and the jute industry (7 per cent); the greatest reductions in the average earnings of males were in boot and shoe manufacture (5.1 per cent) and the linen industry (7.4 per cent). Among female workers the principal increases were in the glass industry (5.5 per cent), the jute and hosiery industries (6.9 per cent), the tobacco industry (7.9 per cent), and the millinery trade (11.6 per cent); the only industry showing a decrease of more than 5 per cent in the average earnings of females was the linen industry (10.1 per cent).

Wages of Food Workers in Italy

THE September, 1929, issue of the Bulletin of Informations of the International Union of the Food and Drink Workers, published in Zurich, contains data as to the average daily wages of food workers in Italy, as follows:

WAGES IN SPECIFIED OCCUPATIONS

[Conversions on basis of lira at par=5.26 cents]

Occupation	Wages per day		Occupation	Wages per day	
	Lire	United States currency		Lire	United States currency
Bakers:			Millers—Continued.		
Oven workers	30.32	$1.59	Southern Italy—		
Dough workers	22.88	1.20	First group	18.20	$0.96
Operatives	15.40	.81	Second group	16.30	.86
Pastry cooks:			Third group	11.70	.62
Skilled	29.00	1.53	Rice stampers:		
Second hands	23.75	1.25	Foremen	23.80	1.25
Journeymen	17.00	.89	First group	21.20	1.12
Unskilled	12.10	.64	Second group	18.80	.99
Chocolate workers:			Third group	17.40	.92
Men—			Assistants	16.00	.84
First group	23.30	1.23	Meat and fruit canning factories:		
Second group	21.75	1.14	Men—		
Third group	18.45	.97	Preparers	20.00	1.05
Fourth group	15.50	.82	Copper work	18.00	.95
Apprentices	10.10	.53	Assistants	16.00	.84
Women—			Women—		
Packers	12.92	.68	Packers	10.80	.57
Finishers	12.90	.68	Selectors	10.00	.53
Wrappers	10.46	.55	Assistants	9.20	.48
Machine attendants	13.50	.71	Apprentices	6.50	.34
Apprentices	5.60	.29			
Clearers-up	8.70	.46			
Millers:					
Northern Italy—					
First group	21.05	1.11			
Second group	19.85	1.04			
Third group	18.65	.98			
Women	9.90	.52			

LABOR AGREEMENTS AWARDS AND DECISIONS

Arbitration Awards

Locomotive Firemen and Enginemen—Boston & Maine Railroad

AN arbitration board was appointed as a result of agreement of July 26, 1929, to arbitrate the dispute between the Brotherhood of Locomotive Firemen and Enginemen and the Boston & Maine Railroad. The carrier selected William L. O'Keefe and the employees selected Frank A. Symonds as arbitrators. The United States Board of Mediation appointed Victor S. Clark as the neutral arbitrator.

The question submitted for arbitration was "Shall firemen on the Boston & Maine Railroad be paid while learning to operate mechanical stokers; and if so, under what regulations?"

The award, dated October 29, 1929, is as follows:

Firemen who have completed one year's service and who have not previously qualified on stoker-fired locomotives shall, when first called or assigned to such locomotives, be accompanied by an instructor, to be selected by the management at its discretion, for one round trip unless they are earlier certified as qualified by a representative of the management. Firemen who have qualified on one type of stoker and who are called or assigned to locomotives equipped with a different type of stoker which they are not qualified to operate, shall receive instruction during one leg of a round trip of additional road service unless previously certified as qualified by a representative of the management. In both instances the learner fireman shall receive the standard rate while under instruction and the instructor, if a fireman, shall receive the regular rate for the locomotive in question.

This award shall go into effect as of July 26, 1929.

Stage Employees and Motion-Picture Machine Operators—Colorado Springs, Colo.

ON November 9, 1929, the Industrial Commission of Colorado gave a decision in the case of the members of Local No. 62, International Alliance of Theatrical Stage Employees and Moving-Picture Machine Operators against the Colorado Springs Theater Corporation. The hearing was held in Colorado Springs, October 28, 1929, and the parties to the dispute agreed to accept the award of the Industrial Commission of Colorado.

The employees contended that they should receive the same contract as they now have with two of the other theaters in Colorado Springs and requested a weekly rate of $56.70 September 1, 1929, to August 31, 1930, and thereafter $58.35. The employer contended that under the present condition of his business in Colorado Springs he could not afford to grant such a wage.

The award of the Industrial Commission of Colorado was as follows:

The commission, after hearing the evidence in behalf of both the employer and the employees and giving the matter very careful consideration, is of the

opinion, and it is the decision and award of the commission, that the employees in the employ of the Colorado Springs Theater Corporation be granted a wage of $1.35 per hour by the employer and that the hours of employment remain as at present, effective November 1, 1929.

Typographical Workers—Milwaukee, Wis.

FRANK E. BAKER, president of the State Teachers' College of Wisconsin, acting as chairman of a board of arbitration to consider the dispute between Milwaukee Typographical Union No. 23 and the newspaper publishers of Milwaukee, on October 1, 1929, granted the request of the union for a reduction of the weekly working hours from 48 to 45 hours. The award was made effective at 7.30 a. m., October 14, 1929, to permit the publishers and the union to make necessary arrangements to bring about the change with the least possible friction and disruption of work.

The union in presenting its request for the shorter hours based its argument on "increased efficiency, increased production due to improvements in machinery, general economic prosperity, hygienic necessities, higher standards of living, increased living costs, general tendencies toward reduction in hours, and comparison with working hours in other cities." The publishers contradicted all the claims of the union and based their counter-argument mainly on the "necessities of manufacture." The union submitted evidence showing that the 45-hour week was in effect in other cities in which conditions are not different from those in Milwaukee.

The arbitrator, in considering increased leisure as a factor in economic prosperity, made the following quotations from an editorial comment on the proposed 5-day week in the building trades appearing in a recent issue of the Milwaukee Journal:

> With two days of leisure there also enters in the theory of consumption. That is, men with two or more full days of time off will use more goods, buy more necessities or luxuries, become better consumers and so stimulate business all around. That, too, is something to be considered.
>
> But the most important consideration is broader. It is recognized that as men become more proficient and as machines replace toilsome hand labor, fewer men can do the world's work or else the world's work can be done in less time. It will not be wise to allow fewer men to do it, because that only means that the few who then would work must support the many who do not. Instead it is better to keep many men employed for shorter periods every week.
>
> All of which really means release from toil; it means progress; it means that the world gradually is seeing that its purpose should be not merely to labor for long hours but rather to do its work in less time and have more left over for wholesome hobbies, travel, study, gardening, outings, radio concerts, a host of other things. Rightly developed, the shorter day and week should advance the welfare of labor and the whole business structure. But it must not mean merely less work, a slowing down of production, in the building trades or anywhere else where the task is such that time is not the controlling factor. Otherwise the experiment is doomed to fail.

The closing paragraph of the decision is as follows:

> The arbitrator believes firmly that this shorter work week can be put into operation in the composing rooms of the Milwaukee papers without causing any great financial loss to the publishers. He has sufficient confidence in the liberality and progressive spirit of the management of all the papers concerned to believe that they will welcome the opportunity for leadership in what seems to be a general economic tendency and in the cooperative morale of the union to justify an expectation that every effort will be put forth by its membership to maintain production costs at the present level.

English Railway Wage Agreement

IN the summer of 1928 the English railway unions agreed to a cut of 2½ per cent in their wages, with the understanding that the reduction, which became effective August 13, should continue for a year, and should then be terminable by either side after three months' notice. (See Labor Review, September, 1928, p. 149.) As soon as the year had expired the unions gave notice of their intention to ask for a restoration of the old rate, and in due course a meeting was held between their representatives and the railway officials, at which the latter placed before the men information concerning the financial state of the railroads, which, they considered, showed that it was not advisable to press the claim for the restoration at the present time. This information was not made public, but the meeting was adjourned to enable the men to discuss it with their respective unions. Further negotiations followed, and on October 11 an agreement was reached under the terms of which the reduction is to be continued until May 13, 1930. At that time wages are to be restored to the old level, and for a further six months, until November 12, 1930, neither side is to make any general proposal to vary either wages or conditions of work. This agreement covered only the three main unions, but the companies, at the time it was made, were negotiating with the shop employees and the other unions concerned, and it was thought there would be no difficulty in securing general assent to these terms.[1]

[1] Data from Railway Review, Sept. 27, 1929, p. 1; and Manchester Guardian, Oct. 12, 1929, p. 13.

UNEMPLOYMENT RELIEF AND STABILIZATION

Paterson Silk Producers Combine to Stabilize the Industry

ACCORDING to the Daily News Record of November 6, 1929, the Broad Silk Manufacturers' Association of Paterson, N. J., is engaged in a program to stabilize the industry. The first step of the association was to place production on a 4-day basis. This action is now being followed up by the formation of a central sales organization designed to handle the pooled output of member establishments. It is hoped to dispose of 15,000 shares of stock at a par value of $10 each to meet the financial needs of a central sales office.

This movement toward stabilization is of particular interest in view of the competition that has resulted from a rapid growth in number of establishments in Paterson. (See Labor Review, August, 1929, p. 3.)

Amendments to Unemployment Insurance Law of Germany

DURING the first week of October, 1929, a law was passed amending the unemployment insurance system in the following particulars: [1]

(*a*) An unemployed person is defined by the law as an industrial wage earner who is temporarily out of employment and who does not earn his living by some individual work. No claim for unemployment insurance benefit can be made if the unemployed wage earner can assist in earning the common cost of living with near relatives having the same household or residence.

(*b*) The time in which a wage earner must have worked during the last two years, before he is entitled to receive the benefit, is extended from six months to one year.

(*c*) In cases where the place of assistance and the last place of work are different the amount of the insurance benefit is fixed according to the agreement wages ("*tarif*") in effect at the place of payment of benefit, instead of on the basis of actual earnings in the former employment.

(*d*) Benefits paid to the unemployed wage earners under the Federal insurance law, or the miners' insurance law, or the employees' insurance law, or by an insurance office which has the right of a public corporation, will be limited to 30 marks ($7.14) per month. The same limitation will be applied to "waiting" money, old-age benefit, and other annuities.

[1] Report by Mr. J. Klahr Huddle, U. S. Consul at Cologne, Germany, Oct. 7, 1929; Gastwirtsgehilfen Zeitung, Berlin, October 17, 1929.

(*e*) The amount of the insurance benefits will be fixed according to the average earnings of the last six months, instead of the last three, as formerly.

(*f*) If a beneficiary refuses to accept work offered, the 4-week period of exclusion from the benefit may, in more flagrant cases, be extended to eight weeks by competent labor bureaus.

(*g*) In view of special conditions of home or cottage industries, the Federal Institute of Employment Service and Unemployment Insurance may issue, for the persons engaged in these industries, administrative measures deviating from the laws in effect.

(*h*) The "waiting" time, which in the former law was graded according to the family status, is now made uniform except for the unmarried unemployed wage earners under 21 years of age.

(*i*) The seasonal unemployed wage earners will hereafter receive only the reduced rates of the emergency relief fund, instead of the full insurance benefit according to the wage groups or the former earnings.

It is estimated that these amendments will result in a total annual saving for the Federal Insurance Institute in the amount of 95,000,000 marks ($22,610,000). As the debt of the institute is expected to increase during the coming winter to 450,000,000 marks ($107,100,000) and as the annual deficit is estimated at 280,000,000 marks ($66,640,000), the problem of relieving the insurance institute financially is left unsolved by the above amendments.

Report of Irish Free State Committee on Unemployment Relief

IN 1927 the Government of the Irish Free State appointed a committee "to consider and report as to the steps that might be taken for the immediate relief of unemployment, regard being had on the one hand to the need for avoiding any undue strain on the resources of agriculture and industry, and on the other, to the fact that the continued existence of abnormal unemployment involves in itself a severe economic loss." The committee was organized in November, 1927, made an interim report in December of that year, and presented its final report and recommendations under date of February 13, 1928.

Under the terms of its appointment, the committee explains, it did not feel either called upon or entitled to investigate the causes of unemployment or its extent. On the latter point, comprehensive data are lacking.

> We think it well to mention that beyond the statistics kept by the Department of Industry and Commerce, there is nothing to indicate the extent of unemployment throughout the Saorstat. As these statistics relate mainly to persons registered under the unemployment insurance acts and as we believe that there are a large number of persons unemployed not so registered, it will be clear that no accurate statistics are available as to the full extent of unemployment in the country.

Figures taken from the records of the Department of Industry and Commerce are given, showing that on November 21, 1927, the total number of men, women, boys, and girls registered as unemployed was 24,267, and that of these, 9,902 were registered in Dublin,

3,052 in Cork, and 1,296 in Limerick, while at the other exchanges and branch employment offices the number registered ranged from 3 at Killybegs to 687 at Drogheda. In other words, as far as registered workers were concerned, unemployment was at that time mainly an urban problem, and, especially, a problem of the State's capital city.

Unemployment exists to a much greater extent in Dublin than in any other part of the State, this being due in the first place to the relatively great population, and in the second place to the tendency of the unemployed from other areas to flock to the city in search of work.

In the main, the report is devoted to a consideration of measures which the Government might legitimately undertake and which would be effective in relieving unemployment. Public works undertaken merely for the relief of destitution, the committee holds, are generally demoralizing and costly, but this criticism does not apply to measures for carrying out works of real importance and value to the State which at the same time may absorb large numbers of the unemployed. The committee therefore recommends a 10-year program of house building, with increased powers to the local authorities to enforce sanitary conditions, to prevent overcrowding, and to compel the clearance of derelict sites; the appointment of county medical officers of health, and the carrying through of public health schemes; the provision of sufficient school buildings in good condition, whether by repairing the present structures or building new ones; an increased program of afforestation, the acceleration of the improvement works of the land commission, the development of fisheries and rural industries, and increased attention to road building and arterial drainage. Finally, in all works carried on by the Government or the local authorities, it is recommended that Irish materials should be used when these can be obtained at reasonable prices.

TREND OF EMPLOYMENT

Summary for October, 1929

EMPLOYMENT decreased 1.2 per cent in October, 1929, as compared with September, while pay-roll totals increased 0.4 per cent, according to reports made to the Bureau of Labor Statistics by 34,722 establishments, having in October, 5,255,529 employees whose earnings in one week were $145,196,138.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both September and October, together with the per cent of change in October, are shown in the following summary:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, SEPTEMBER AND OCTOBER, 1929

Industrial group	Establishments	Employment		Per cent of change	Pay roll in one week		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
1. Manufacturing	**12,816**	**3,628,765**	**3,579,932**	[1] **−1.0**	**$99,529,616**	**$98,728,668**	[1] **−0.3**
2. Coal mining	**1,476**	**327,960**	**336,091**	**+2.5**	**9,019,780**	**10,512,222**	**+16.5**
Anthracite	162	115,562	120,309	+4.1	3,620,804	4,667,597	+28.9
Bituminous	1,314	212,398	215,782	+1.6	5,398,976	5,844,625	+8.3
3. Metalliferous mining	**342**	**63,323**	**63,178**	**−0.2**	**1,912,161**	**1,933,040**	**+1.1**
4. Quarrying and nonmetallic mining	**651**	**39,726**	**38,613**	**−2.8**	**1,081,771**	**1,042,019**	**−3.7**
5. Public utilities	**9,602**	**738,120**	**734,224**	**−0.5**	**21,678,320**	**21,897,914**	**+1.0**
6. Trade	**7,658**	**292,815**	**303,266**	**+3.6**	**7,511,613**	**7,699,956**	**+2.4**
Wholesale	1,890	63,486	64,216	+1.1	1,964,718	1,953,908	−0.6
Retail	5,768	229,329	239,050	+4.2	5,546,895	5,737,048	+3.4
7. Hotels	**1,635**	**148,134**	**144,965**	**−2.1**	[2] **2,460,368**	[2] **2,460,527**	+[3]
8. Canning and preserving	**542**	**81,016**	**55,260**	**−31.8**	**1,438,388**	**930,792**	**−35.3**
Total	**34,722**	**5,319,859**	**5,255,529**	**−1.2**	**144,632,617**	**145,196,138**	**+0.4**

Recapitulation by Geographic Divisions

Geographic division							
New England [4]	2,392	492,663	492,544	−[3]	$12,702,883	$12,614,163	−0.7
Middle Atlantic [5]	6,113	1,488,083	1,491,240	+0.2	43,006,632	44,410,649	+3.3
East North Central [6]	8,396	1,675,602	1,626,254	−2.9	49,523,438	48,637,444	−1.8
West North Central [7]	4,031	332,671	326,703	−1.8	8,508,200	8,367,776	−1.7
South Atlantic [8]	4,301	508,434	509,570	+0.2	10,792,684	10,982,821	+1.8
East South Central [9]	2,037	216,815	217,074	+0.1	4,325,665	4,426,548	+2.3
West South Central [10]	2,322	182,353	182,245	−0.1	4,216,752	4,316,742	+2.4
Mountain [11]	1,317	111,633	108,914	−2.4	3,212,758	3,233,964	+0.7
Pacific [12]	3,813	311,605	300,985	−3.4	8,343,005	8,206,031	−1.6
All divisions	**34,722**	**5,319,859**	**5,255,529**	**−1.2**	**144,632,617**	**145,196,138**	**+0.4**

[1] Weighted per cent of change for the combined 54 manufacturing industries repeated from Table 2, p. 172; the remaining per cents of change, including total, are unweighted.
[2] Cash payments only; see text, p. 183.
[3] Less than one-tenth of 1 per cent.
[4] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
[5] New Jersey, New York, Pennsylvania.
[6] Illinois, Indiana, Michigan, Ohio, Wisconsin.
[7] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
[8] Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
[9] Alabama, Kentucky, Mississippi, Tennessee.
[10] Arkansas, Louisiana, Oklahoma, Texas.
[11] Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.
[12] California, Oregon, Washington.

Anthracite and bituminous coal mining and wholesale and retail trade followed their characteristic October trend upward, but manufacturing industries, which in four of the last six years had shown an upward trend also, this year took the opposite course; the remaining five groups showed decreased employment.

Three of the nine geographic divisions had practically the same number of employees in October as in September, while the Middle Atlantic and South Atlantic divisions each had gained small percentages, and the Pacific, Mountain, West North Central, and East North Central divisions each had lost appreciable numbers of employees, especially the last named which is most affected by changed conditions in the automobile industry.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of August and September instead of for September and October, consequently the figures can not be combined with those presented in the foregoing table.

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

Industry	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	Aug. 15, 1929	Sept. 15, 1929		August, 1929	September, 1929	
Class I railroads	1,742,584	1,730,840	−0.7	$251,946,549	$239,975,829	−4.8

The total number of employees included in this summary is 7,000,000, whose combined earnings in one week amounted to more than $200,000,000.

1. Employment in Selected Manufacturing Industries in October, 1929

Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, September and October, 1929

EMPLOYMENT in manufacturing industries *decreased* 1 per cent in October as compared with September, and pay-roll totals *decreased* 0.3 per cent.

October usually shows a small increase in employment, but in 1929 decreases of over 10 per cent and of 7 per cent in the automobile and the automobile-tire industries, respectively, more than overcame the small net increase in the 52 remaining industries. Pay-roll totals usually show a greater increase in October than employment, this increase being largely a recovery from the effect of Labor Day closing in September, the decrease in October, 1929, in pay-roll totals was therefore considerably less than the decrease in employment.

The Bureau of Labor Statistics' weighted index of employment in manufacturing industries for October, 1929, is 98.3 as compared with 99.3 for September, 1929, and 95.9 for October, 1928; the weighted index of pay-roll totals for October, 1929, is 102.3, as compared with 102.6 for September, 1929, and 99 for October, 1928. The monthly average, 1926, equals 100.

Increased employment in October as compared with September was shown in the food, chemical, textile, tobacco, paper, and nonferrous metal groups of industries. The vehicle group showed a decrease of 5.2 per cent, while the remaining 5 groups showed decreases ranging from 2.0 per cent in the lumber group to 0.2 per cent in the leather group.

The cotton goods industry *gained* 0.8 per cent in employment in October, the iron and steel industry *decreased* 2.5 per cent, foundries *decreased* 0.9 per cent, petroleum refining *gained* 0.4 per cent, and glass, cigars, and shipbuilding also reported small *gains;* the electric machinery industry fell off 0.6 per cent in October thereby ending a series of monthly increases which began in July, 1928.

Employment in rayon plants increased 2.9 per cent in October, and radio plants gained 7.8 per cent.

The October-September comparison is based upon reports from 12,762 establishments (exclusive of rayon and radio establishments; see note 3, p. 171) in 54 of the chief manufacturing industries of the United States. These establishments had in October 3,524,647 employees whose earnings in one week were $97,472,746.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1929

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
Food and kindred products	**1,853**	**236,593**	**241,136**	(1)	**$6,184,267**	**$6,229,191**	(1)
Slaughtering and meat packing	202	87,927	88,669	+0.8	2,331,407	2,322,963	−0.4
Confectionery	298	35,583	39,558	+11.2	660,609	729,688	+10.5
Ice cream	315	13,865	12,263	−11.6	460,388	406,306	−11.7
Flour	332	17,103	17,118	+0.1	483,959	473,733	−2.1
Baking	690	71,657	72,213	+0.8	1,936,248	1,948,043	+0.6
Sugar refining, cane	16	10,458	11,315	+8.2	311,656	348,458	+11.8
Textiles and their products	**2,201**	**630,283**	**636,746**	(1)	**12,376,267**	**12,690,005**	(1)
Cotton goods	486	215,273	216,914	+0.8	3,313,321	3,423,169	+3.3
Hosiery and knit goods	344	100,839	103,412	+2.6	1,955,770	2,093,312	+7.0
Silk goods	285	66,303	66,327	+(2)	1,398,587	1,414,900	+1.2
Woolen and worsted goods	187	63,030	63,698	+1.1	1,407,010	1,445,130	+2.7
Carpets and rugs	30	24,443	25,681	+5.1	616,718	673,928	+9.3
Dyeing and finishing textiles	116	34,328	34,862	+1.6	845,148	874,355	+3.5
Clothing, men's	320	66,486	65,083	−2.1	1,542,468	1,430,584	−7.3
Shirts and collars	120	22,028	22,174	+0.7	350,986	362,968	+3.4
Clothing, women's	224	24,845	26,140	+5.2	651,174	688,396	+5.7
Millinery and lace goods	89	12,708	12,455	−2.0	295,085	283,263	−4.0
Iron and steel and their products	**1,956**	**747,850**	**739,100**	(1)	**23,129,555**	**23,159,760**	(1)
Iron and steel	208	286,038	278,896	−2.5	9,277,426	9,048,928	−2.5
Cast-iron pipe	39	11,999	11,635	−3.0	283,035	272,881	−3.6
Structural ironwork	172	30,296	30,055	−0.8	932,106	940,554	+0.9
Foundry and machine-shop products	1,080	290,351	287,618	−0.9	8,842,740	8,955,484	+1.3
Hardware	72	32,566	32,503	−0.2	836,926	844,301	+0.9
Machine tools	154	42,464	42,774	+0.7	1,383,417	1,408,105	+1.8
Steam fittings and steam and hot-water heating apparatus	112	32,587	33,379	+2.4	961,291	1,018,366	+5.9
Stoves	119	21,549	22,240	+3.2	612,614	671,141	+9.6
Lumber and its products	**1,404**	**254,259**	**249,436**	(1)	**5,733,200**	**5,731,810**	(1)
Lumber, sawmills	645	147,681	143,168	−3.1	3,115,206	3,046,570	−2.2
Lumber, millwork	332	35,933	34,152	−5.0	861,071	830,679	−3.5
Furniture	427	70,645	72,116	+2.1	1,756,923	1,854,561	+5.6
Leather and its products	**451**	**146,298**	**145,884**	(1)	**3,485,793**	**3,342,340**	(1)
Leather	129	27,522	27,764	+0.9	711,384	733,118	+3.1
Boots and shoes	322	118,776	118,120	−0.6	2,774,409	2,609,222	−6.0

See footnotes at end of table, p. 171.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1929—Con.

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
Paper and printing	**1,253**	**216,033**	**217,133**	(1)	**$7,310,025**	**$7,428,544**	(1)
Paper and pulp	209	58,158	58,556	+0.7	1,600,237	1,635,329	+2.2
Paper boxes	191	20,348	21,276	+4.6	473,343	497,490	+5.1
Printing, book and job	398	51,202	49,425	−3.5	1,745,189	1,718,946	−1.5
Printing, newspapers	455	86,325	87,876	+1.8	3,491,256	3,576,779	+2.4
Chemicals and allied products	**387**	**99,329**	**100,318**	(1)	**2,987,306**	**3,025,478**	(1)
Chemicals	142	37,260	37,965	+1.9	1,035,448	1,070,472	+3.4
Fertilizers	172	10,706	10,800	+0.9	205,497	206,174	+0.3
Petroleum refining	73	51,363	51,553	+0.4	1,746,361	1,748,832	+0.1
Stone, clay, and glass products	**1,001**	**130,821**	**128,665**	(1)	**3,408,526**	**3,376,538**	(1)
Cement	114	25,150	24,163	−3.9	759,533	718,430	−5.4
Brick, tile, and terra cotta	637	43,555	41,742	−4.2	1,046,370	1,025,351	−2.0
Pottery	116	18,329	18,582	+1.4	457,306	474,607	+3.8
Glass	134	43,787	44,178	+0.9	1,145,317	1,158,150	+1.1
Metal products, other than iron and steel	**230**	**56,122**	**56,206**	(1)	**1,509,938**	**1,537,867**	(1)
Stamped and enameled ware	75	19,985	20,127	+0.7	475,490	498,313	+4.8
Brass, bronze, and copper products	155	36,137	36,079	−0.2	1,034,448	1,039,554	+0.5
Tobacco products	**244**	**64,023**	**64,709**	(1)	**1,096,675**	**1,107,497**	(1)
Chewing and smoking tobacco and snuff	26	8,556	8,227	−3.8	134,897	139,110	+3.1
Cigars and cigarettes	218	55,467	56,482	+1.8	961,778	968,387	+0.7
Vehicles for land transportation	**1,286**	**613,980**	**568,999**	(1)	**19,867,161**	**18,581,811**	(1)
Automobiles	222	438,928	393,297	−10.4	14,449,053	12,980,478	−10.2
Carriages and wagons	52	1,644	1,629	−0.9	36,395	36,645	+0.7
Car building and repairing, electric-railroad	450	29,246	29,548	+1.0	909,010	927,226	+2.0
Car building and repairing, steam-railroad	562	144,162	144,525	+0.3	4,472,703	4,637,462	+3.7
Miscellaneous industries	**550**	**433,174**	**431,600**	(1)	**12,440,903**	**12,517,827**	(1)
Agricultural implements	87	27,929	28,162	+0.8	795,235	829,868	+4.4
Electrical machinery, apparatus and supplies	200	234,002	232,650	−0.6	7,115,030	7,109,024	−0.1
Pianos and organs	73	7,559	7,705	+1.9	229,974	247,003	+7.4
Rubber boots and shoes	13	18,902	18,940	+0.2	474,433	467,693	−1.4
Automobile tires	41	55,915	52,021	−7.0	1,569,918	1,491,828	−5.0
Shipbuilding	82	36,763	36,837	+0.2	1,122,950	1,116,489	−0.6
Rayon [3]	12	18,254	18,781	+2.9	396,213	412,996	+4.2
Radio [3]	42	33,850	36,504	+7.8	737,150	842,926	+14.3
All industries	**12,816**	**3,628,765**	**3,579,932**	(1)	**99,529,616**	**98,728,668**	(1)

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION [4]							
New England	1,503	413,773	414,974	+0.3	$10,495,677	$10,434,966	−0.6
Middle Atlantic	2,943	971,990	969,636	−0.2	28,280,144	28,436,908	+0.6
East North Central	3,252	1,280,354	1,236,770	−3.4	38,813,187	37,769,646	−2.7
West North Central	1,142	187,019	184,974	−1.1	4,849,194	4,788,930	−1.2
South Atlantic	1,639	354,637	354,679	+ (2)	7,001,184	7,110,026	+1.6
East South Central	617	134,191	134,261	+0.1	2,594,441	2,616,024	+0.8
West South Central	690	109,254	109,055	−0.2	2,546,666	2,597,584	+2.0
Mountain	226	35,288	34,653	−1.8	977,376	979,320	+0.2
Pacific	804	142,259	140,930	−0.9	3,971,747	3,995,264	+0.6
All divisions	**12,816**	**3,628,765**	**3,579,932**	(1)	**99,529,616**	**98,728,668**	(1)

[1] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

[2] Less than one-tenth of 1 per cent.

[3] The rayon industry was surveyed for the first time for the January-February comparison, and the radio industry for the March-April comparison, and, since the data for computing relative numbers are not yet available, these industries are not included in the bureau's indexes of employment and pay-roll totals. The total figures for all manufacturing industries given in the text, p. 170, do not include rayon or radio.

[4] See footnotes 4 to 12, p. 168.

TABLE 2.—PER CENT OF CHANGE, SEPTEMBER TO OCTOBER, 1929—12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change September to October, 1929		Group	Per cent of change September to October, 1929	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	+1.9	+0.7	Metal products, other than iron and steel	+0.1	+1.7
Textiles and their products	+1.1	+2.2	Tobacco products	+1.1	+0.9
Iron and steel and their products	−1.2	+0.2	Vehicles for land transportation	−5.2	−3.9
Lumber and its products	−2.0	(1)	Miscellaneous industries	−1.4	−0.6
Leather and its products	−0.2	−4.1			
Paper and printing	+0.2	+1.3	**All industries**	**−1.0**	**−0.3**
Chemicals and allied products	+1.2	+1.6			
Stone, clay, and glass products	−1.9	−0.8			

[1] No change.

Comparison of Employment and Pay-Roll Totals in Manufacturing Industries in October, 1929, and October, 1928

THE LEVEL of employment in manufacturing industries in October, 1929, was 2.5 per cent *higher* than in October, 1928, and employees' earnings were 3.3 per cent *higher*, this being the thirteenth successive month showing a higher level of employment than in the same month of the preceding year and the fourteenth successive month of higher pay-roll totals.

Eight of the 12 groups of industries and 37 of 54 separate industries had more employees at the end of this 12-month period than at the beginning. The miscellaneous group gained 21.4 per cent, the chemical group 8.3 per cent, the iron and steel group gained 6 per cent, the leather group 4.8 per cent, and the paper, textile, food, and nonferrous metal groups showed smaller gains. The outstanding gains in separate industries were in shipbuilding, electrical machinery, machine tools, petroleum refining, foundry and machine-shop products, hosiery and knit goods, structural ironwork, and furniture.

The notable decrease in group employment was 5.6 per cent in the vehicle group, while in separate industries the notable decreases from October, 1928, to October, 1929, were in automobiles, pianos, automobile tires, and cement.

Employment in seven of the nine geographic divisions was substantially greater in October, 1929, than in October, 1928, the increases in the West South Central, Middle Atlantic, and East South Central divisions being especially marked; the East North Central and Pacific divisions each showed decreased employment of 0.5 per cent.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS, IN MANUFACTURING INDUSTRIES, OCTOBER, 1929, WITH OCTOBER, 1928

[The per cent of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change, October, 1929, compared with October, 1928	
	Number on pay roll	Amount of pay roll
Food and kindred products	+1.7	+2.7
Slaughtering and meat packing	+3.7	+4.3
Confectionery	−0.6	(1)
Ice cream	+0.7	+1.4
Flour	+2.1	+1.1
Baking	+1.3	+2.8
Sugar refining, cane	+0.5	+1.3
Textiles and their products	+1.8	+0.5
Cotton goods	+0.7	+1.2
Hosiery and knit goods	+9.4	+11.0
Silk goods	(1)	−2.4
Woolen and worsted goods	+2.2	+1.6
Carpets and rugs	+5.9	+8.4
Dyeing and finishing textiles	+3.0	−0.5
Clothing, men's	+1.6	−3.9
Shirts and collars	+1.2	−0.4
Clothing, women's	−0.9	−2.5
Millinery and lace goods	+1.8	−1.0
Iron and steel and their products	+6.0	+6.6
Iron and steel	+2.7	+2.5
Cast-iron pipe	−0.4	+5.2
Structural ironwork	+8.9	+7.0
Foundry and machine-shop products	+10.3	+11.8
Hardware	+2.1	+1.7
Machine tools	+23.2	+21.2
Steam fittings and steam and hot-water heating apparatus	−4.7	(1)
Stoves	+3.6	+2.1
Lumber and its products	−0.7	+1.4
Lumber, sawmills	−2.9	−1.3
Lumber, millwork	−5.6	−5.0
Furniture	+6.8	+7.9
Leather and its products	+4.8	+4.3
Leather	+2.3	+7.9
Boots and shoes	+5.4	+3.4
Paper and printing	+3.2	+5.7
Paper and pulp	+2.3	+4.0
Paper boxes	+4.2	+5.2
Printing, book and job	+3.7	+5.3
Printing, newspapers	+4.6	+7.1
Chemicals and allied products	+8.3	+8.5
Chemicals	+3.5	+2.0
Fertilizers	−1.9	−3.8
Petroleum refining	+19.4	+19.9
Stone, clay, and glass products	−3.1	−5.0
Cement	−9.7	−10.2
Brick, tile, and terra cotta	−3.2	−6.1
Pottery	−3.5	+0.1
Glass	+3.5	+1.4
Metal products, other than iron and steel	+0.5	−2.2
Stamped and enameled ware	+0.9	+0.2
Brass, bronze, and copper products	+0.7	−2.4
Tobacco products	−4.2	−1.1
Chewing and smoking tobacco and snuff	−7.3	−6.4
Cigars and cigarettes	−3.9	−0.6
Vehicles for land transportation	−5.6	−5.1
Automobiles	−15.4	−19.5
Carriages and wagons	+2.2	+3.2
Car building and repairing, electric-railroad	−0.3	+0.6
Car building and repairing, steam-railroad	+5.0	+11.3
Miscellaneous industries	+21.4	+22.6
Agricultural implements	+1.0	−1.2
Electrical machinery, apparatus, and supplies	+26.6	+26.3
Pianos and organs	−14.6	−14.3
Rubber boots and shoes	+1.2	+5.3
Automobile tires	−12.4	−20.9
Shipbuilding	+32.8	+37.9
All industries	+2.5	+3.3

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION [2]		
New England	+2.3	+3.4
Middle Atlantic	+5.8	+7.3
East North Central	−0.5	−4.2
West North Central	+3.2	+3.7
South Atlantic	+1.5	+3.0
East South Central	+4.1	+6.3
West South Central	+8.4	+14.9
Mountain	+0.5	+2.6
Pacific	−0.5	+0.7
All divisions	+2.5	+3.3

[1] No change.

[2] See notes 4 to 12, p. 168.

Per Capita Earnings in Manufacturing Industries in October, 1929

PER CAPITA EARNINGS of employees in the combined 54 manufacturing industries in October, 1929, were 0.8 per cent higher than in September, 1929, and 0.9 per cent higher than in October, 1928.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS IN **MANUFACTURING** INDUSTRIES, OCTOBER, 1929, WITH SEPTEMBER, 1929, AND OCTOBER, 1928

Industry	Percent of change, October, 1929, compared with—		Industry	Percent of change, October, 1929, compared with—	
	September, 1929	October, 1928		September, 1929	October, 1928
Chewing and smoking tobacco and snuff	+7.2	+1.1	Car building and repairing, electric-railroad	+1.0	+0.7
Stoves	+6.2	−1.3	Machine tools	+1.0	−1.8
Pianos and organs	+5.4	+0.1	Lumber, sawmills	+0.9	+1.7
Hosiery and knit goods	+4.4	+1.4	Brass, bronze, and copper products	+0.6	−2.9
Stamped and enameled ware	+4.1	−0.9	Printing, newspapers	+0.6	+2.5
Carpets and rugs	+4.0	+2.6	Clothing, women's	+0.5	−1.6
Agricultural implements	+3.5	−2.4	Electrical machinery, apparatus, and supplies	+0.5	−0.2
Car building and repairing, steam-railroad	+3.4	+5.8	Paper boxes	+0.5	+1.0
Furniture	+3.4	+1.1	Automobiles	+0.2	−4.8
Steam fittings and steam and hot-water heating apparatus	+3.4	+4.5	Glass	+0.2	−2.1
Sugar refining, cane	+3.4	+0.7	Iron and steel	+0.1	+0.2
Shirts and collars	+2.8	−1.3	Baking	−0.1	+1.6
Cotton goods	+2.5	+0.5	Ice cream	−0.2	+0.8
Pottery	+2.4	+3.4	Petroleum refining	−0.2	+0.9
Brick, tile, and terra cotta	+2.2	−3.0	Fertilizers	−0.5	−1.3
Foundry and machine-shop products	+2.2	+1.4	Cast-iron pipe	−0.6	+5.7
Leather	+2.2	+5.4	Confectionery	−0.6	+0.8
Automobile tires	+2.1	−10.1	Shipbuilding	−0.8	+3.6
Printing, book and job	+2.1	+2.0	Cigars and cigarettes	−1.1	+3.6
Dyeing and finishing textiles	+1.9	−3.5	Slaughtering and meat packing	−1.2	+1.0
Structural ironwork	+1.7	−1.4	Cement	−1.6	−0.4
Woolen and worsted goods	+1.7	−0.8	Rubber boots and shoes	−1.6	+3.9
Carriages and wagons	+1.6	+1.3	Millinery and lace goods	−2.1	−2.6
Chemicals	+1.5	−1.6	Flour	−2.2	−1.2
Lumber, millwork	+1.5	+0.5	Clothing, men's	−5.3	−5.5
Paper and pulp	+1.5	+1.8	Boots and shoes	−5.4	−2.2
Hardware	+1.1	−0.2	**All industries**	**+0.8**	**+0.9**
Silk goods	+1.1	−2.4			

Indexes of Employment and Pay-Roll Totals in Manufacturing Industries

INDEX NUMBERS for October, 1928, and for August, September, and October, 1929, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics together with general indexes for the combined 12 groups of industries appear in Table 5.

TABLE 5.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, OCTOBER, 1928, AND AUGUST, SEPTEMBER, AND OCTOBER, 1929

[Monthly average, 1926=100]

Industry	Employment				Pay-roll totals			
	1928	1929			1928	1929		
	October	August	September	October	October	August	September	October
General index	**95.9**	**98.6**	**99.3**	**98.3**	**99.0**	**102.1**	**102.6**	**102.3**
Food and kindred products	**102.3**	**99.4**	**102.1**	**104.0**	**103.2**	**102.2**	**105.3**	**106.0**
Slaughtering and meat packing	97.8	99.9	100.6	101.4	99.5	101.1	104.2	103.8
Confectionery	111.7	85.7	99.8	111.0	112.7	88.6	102.0	112.7
Ice cream	90.0	108.0	102.5	90.6	89.9	107.4	103.3	91.2
Flour	104.3	104.9	106.4	106.5	111.4	110.5	115.0	112.6
Baking	103.9	102.3	104.4	105.2	104.2	103.9	106.5	107.1
Sugar refining, cane	96.3	99.2	89.5	96.8	101.7	104.8	92.1	103.0
Textiles and their products	**96.5**	**95.1**	**97.1**	**98.2**	**99.5**	**95.0**	**97.8**	**100.0**
Cotton goods	94.1	91.6	94.0	94.8	93.1	88.4	91.2	94.2
Hosiery and knit goods	94.3	97.2	100.6	103.2	102.4	101.0	106.3	113.7
Silk goods	98.1	98.3	98.1	98.1	104.3	101.3	100.6	101.8
Woolen and worsted goods	96.4	96.8	97.4	98.5	99.1	96.9	98.1	100.7
Carpets and rugs	103.0	105.0	103.8	109.1	100.0	98.5	99.2	108.4
Dyeing and finishing textiles	99.4	98.0	100.8	102.4	104.0	97.4	100.0	103.5
Clothing, men's	91.8	95.7	95.3	93.3	88.7	95.1	92.0	85.2
Shirts and collars	93.5	91.1	93.9	94.6	95.0	89.6	91.5	94.6
Clothing, women's	109.1	97.2	102.8	108.1	117.8	97.6	108.7	114.9
Millinery and lace goods	90.6	90.4	94.0	92.2	90.4	87.4	93.2	89.5
Iron and steel and their products	**93.9**	**100.4**	**100.7**	**99.5**	**97.9**	**104.5**	**104.2**	**104.4**
Iron and steel	91.5	97.5	96.3	93.9	96.7	103.4	101.7	99.1
Cast-iron pipe	79.7	81.7	81.8	79.4	76.3	83.3	83.3	80.3
Structural ironwork	98.2	106.8	107.7	106.9	105.7	110.5	112.1	113.1
Foundry and machine-shop products	94.9	105.3	105.7	104.7	97.9	109.0	108.1	109.5
Hardware	90.1	89.4	92.2	92.0	92.6	90.9	93.4	94.2
Machine tools	110.2	131.2	134.9	135.8	120.9	137.6	143.9	146.5
Steam fittings and steam and hot-water heating apparatus	83.0	76.6	77.2	79.1	82.8	76.2	78.2	82.8
Stoves	96.7	91.5	97.1	100.2	100.2	85.8	93.4	102.3
Lumber and its products	**90.2**	**92.0**	**91.4**	**89.6**	**93.6**	**93.1**	**94.9**	**94.9**
Lumber, sawmills	88.8	90.8	89.0	86.2	91.8	91.2	92.6	90.6
Lumber, millwork	84.6	86.9	84.1	79.9	87.2	88.2	85.8	82.8
Furniture	97.7	98.2	102.1	104.3	103.3	100.1	105.6	111.5
Leather and its products	**93.7**	**97.1**	**98.4**	**98.2**	**92.6**	**101.3**	**100.7**	**96.6**
Leather	94.0	94.2	95.3	96.2	93.2	97.6	97.6	100.6
Boots and shoes	93.6	97.8	99.2	98.7	92.4	102.4	101.6	95.5
Paper and printing	**99.9**	**101.1**	**102.9**	**103.1**	**103.2**	**104.4**	**107.7**	**109.1**
Paper and pulp	94.7	96.0	96.2	96.9	96.8	98.7	98.5	100.7
Paper boxes	99.4	95.1	99.0	103.6	107.9	100.7	108.0	113.5
Printing, book and job	98.3	103.1	105.6	101.9	101.3	103.6	108.3	106.7
Printing, newspapers	106.0	107.1	108.9	110.9	108.9	110.4	113.9	116.6
Chemicals and allied products	**94.9**	**98.1**	**101.6**	**102.8**	**98.5**	**102.0**	**105.2**	**106.9**
Chemicals	102.0	102.2	103.6	105.6	107.5	105.2	106.0	109.6
Fertilizers	93.5	73.8	90.9	91.7	96.3	78.2	92.3	92.6
Petroleum refining	86.4	101.0	102.7	103.2	89.0	103.1	106.6	106.7
Stone, clay, and glass products	**91.6**	**99.6**	**99.5**	**88.8**	**93.6**	**89.4**	**89.6**	**88.9**
Cement	89.6	85.8	84.2	80.9	92.0	87.8	87.3	82.6
Brick, tile, and terra cotta	86.4	88.6	87.3	83.6	85.9	84.6	82.4	80.7
Pottery	97.4	91.9	92.7	94.0	94.4	88.6	91.1	94.5
Glass	95.0	95.6	97.4	98.3	100.3	97.9	100.6	101.7
Metal products, other than iron and steel	**95.8**	**97.1**	**96.2**	**96.3**	**104.6**	**102.1**	**100.6**	**102.3**
Stamped and enameled ware	89.5	90.4	89.7	90.3	93.4	92.9	89.3	93.6
Brass, bronze, and copper products	98.4	100.3	99.3	99.1	108.3	105.8	105.1	105.7
Tobacco products	**101.3**	**94.9**	**95.9**	**97.0**	**100.6**	**95.7**	**98.6**	**99.5**
Chewing and smoking tobacco and snuff	92.7	84.4	89.3	85.9	95.6	87.6	86.8	89.5
Cigars and cigarettes	102.4	96.3	96.7	98.4	101.3	96.7	100.0	100.7

TABLE 5.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, OCTOBER, 1928, AND AUGUST, SEPTEMBER, AND OCTOBER, 1929—Continued

Industry	Employment				Pay-roll totals			
	1928	1929			1928	1929		
	October	August	September	October	October	August	September	October
Vehicles for land transportation	**100.3**	**100.8**	**99.9**	**94.7**	**106.1**	**109.1**	**104.8**	**100.7**
Automobiles	122.6	117.6	115.7	103.7	130.5	124.6	117.0	105.1
Carriages and wagons	82.4	87.9	85.0	84.2	90.0	94.5	92.2	92.9
Car building and repairing, electric-railroad	92.7	92.9	91.5	92.4	94.5	93.9	93.3	95.1
Car building and repairing, steam-railroad	82.7	86.3	86.5	86.8	86.9	94.3	93.2	96.7
Miscellaneous industries	**93.2**	**115.2**	**114.7**	**113.1**	**93.3**	**113.4**	**115.1**	**114.4**
Agricultural implements	109.0	116.2	109.2	110.1	114.2	119.7	108.1	112.8
Electrical machinery, apparatus, and supplies	99.9	126.9	127.3	126.5	103.4	126.3	130.8	130.6
Pianos and organs	78.0	57.9	65.4	66.6	79.7	53.1	63.6	68.3
Rubber boots and shoes	102.3	100.2	103.3	103.5	102.1	102.6	109.0	107.5
Automobile tires	108.6	107.2	102.3	95.1	111.7	100.9	92.9	88.3
Shipbuilding	79.8	105.0	105.8	106.0	79.7	104.5	110.6	109.9

Table 6 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to October, 1929.

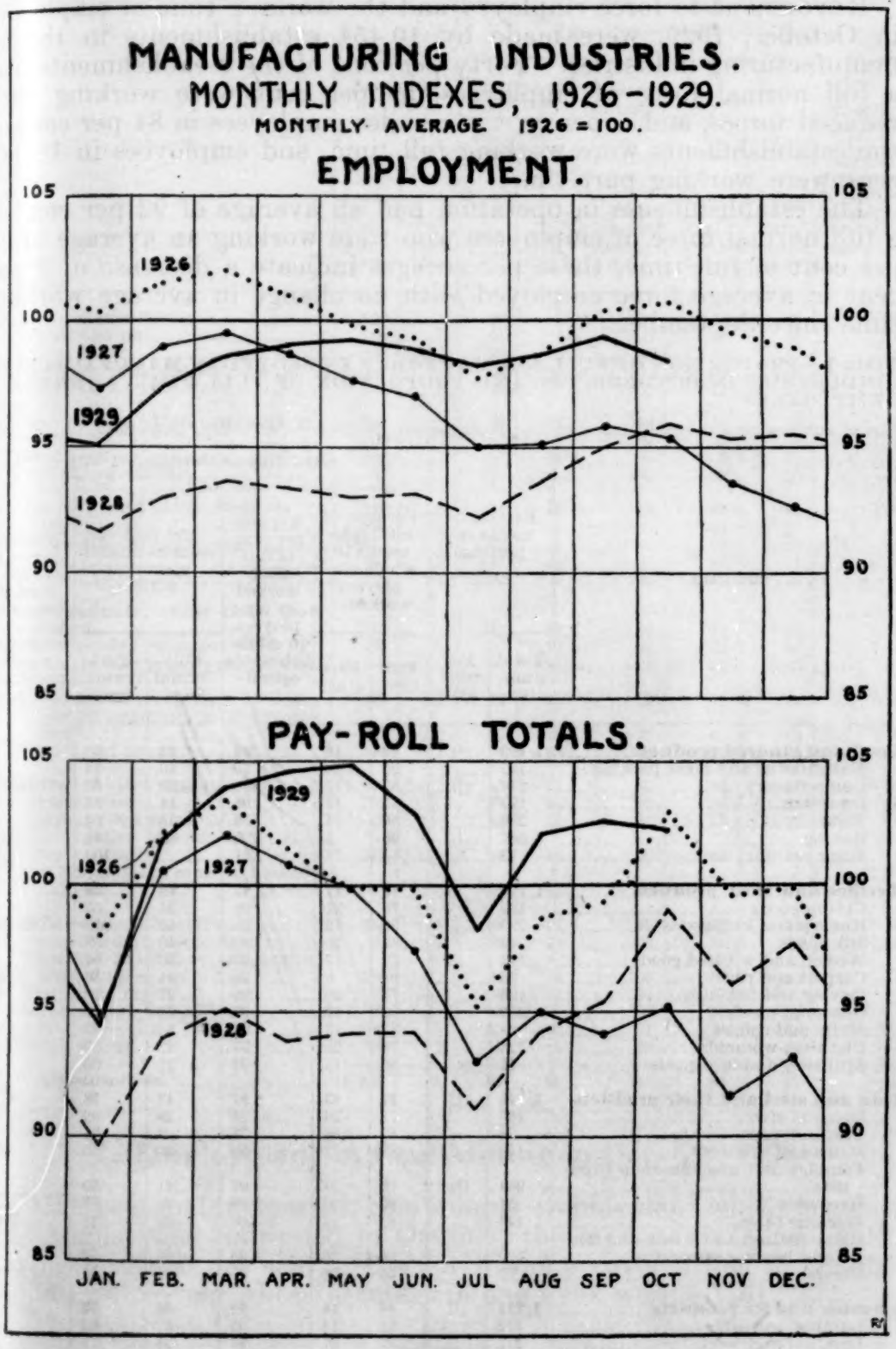
Following Table 6 is a chart which represents the 54 industries combined and shows, by months, the course of pay-roll totals as well as the course of employment. It includes the years 1926 and 1927, as well as 1928, and January, February, March, April, May, June, July, August, September, and October, 1929.

TABLE 6.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO OCTOBER, 1929

[Monthly average, 1926=100]

Month	Employment							Pay-roll totals						
	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929
January	106.6	103.8	97.9	100.4	97.3	91.6	95.2	95.8	98.6	93.9	98.0	94.9	89.6	94.5
February	108.4	105.1	99.7	101.5	99.0	93.0	97.4	99.4	103.8	99.3	102.2	100.6	93.9	101.8
March	110.8	104.9	100.4	102.0	99.5	93.7	98.6	104.7	103.3	100.8	103.4	102.0	95.2	103.9
April	110.8	102.8	100.2	101.0	98.6	93.3	99.1	105.7	101.1	98.3	101.5	100.8	93.8	104.6
May	110.8	98.8	98.9	99.8	97.6	93.0	99.2	109.4	96.5	98.5	99.8	99.8	94.1	104.8
June	110.9	95.6	98.0	99.3	97.0	93.1	98.8	109.3	90.8	95.7	99.7	97.4	94.2	102.8
July	109.2	92.3	97.2	97.7	95.0	92.2	98.2	104.3	84.3	93.5	95.2	93.0	91.2	98.2
August	108.5	92.5	97.8	98.7	95.1	93.6	98.6	103.7	87.2	95.4	98.7	95.0	94.2	102.1
September	108.6	94.3	98.9	100.3	95.8	95.0	99.3	104.4	89.8	94.4	99.3	94.1	95.4	102.6
October	108.1	95.6	100.4	100.7	95.3	95.9	98.3	106.8	92.4	100.4	102.9	95.2	99.0	102.3
November	107.4	95.5	100.7	99.5	93.5	95.4	------	105.4	91.4	100.4	99.6	91.6	96.1	------
December	105.4	97.3	100.8	98.9	92.6	95.5	------	103.2	95.7	101.6	99.8	93.2	97.7	------
Average	**108.8**	**98.2**	**99.2**	**100.0**	**96.4**	**93.8**	[1] **98.3**	**104.3**	**94.6**	**97.7**	**100.0**	**96.5**	**94.5**	[1] **101.8**

[1] Average for 10 months.


MANUFACTURING INDUSTRIES.
MONTHLY INDEXES, 1926-1929.
MONTHLY AVERAGE 1926 = 100.
EMPLOYMENT.
105
100
95
90
85
1926
1927
1929
1928
PAY-ROLL TOTALS.
JAN. FEB. MAR. APR. MAY JUN. JUL AUG SEP OCT NOV DEC.

Force Employed and Time Worked in Manufacturing Industries in October, 1929

REPORTS as to force employed and the working time of employees in October, 1929, were made by 10,454 establishments in the 54 manufacturing industries. Forty per cent of the establishments had a full normal force of employees, 59 per cent were working with reduced forces, and 1 per cent were idle; employees in 84 per cent of the establishments were working full time, and employees in 16 per cent were working part time.

The establishments in operation had an average of 92 per cent of a full normal force of employees who were working an average of 98 per cent of full time, these percentages indicate a decrease of 1 per cent in average force employed with no change in average working time since September.

TABLE 7.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN OCTOBER, 1929, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products	**1,468**	(1)	**90**	**10**	**99**	**42**	**58**	**93**
Slaughtering and meat packing	147	------	90	10	99	46	54	91
Confectionery	244	(1)	82	17	98	32	67	91
Ice cream	197	1	85	14	98	14	85	76
Flour	280	------	86	14	98	46	54	97
Baking	587	(1)	96	4	100	53	46	100
Sugar refining, cane	13	------	85	15	101	--------	100	85
Textiles and their products	**1,777**	**1**	**83**	**17**	**97**	**40**	**59**	**89**
Cotton goods	439	1	78	21	96	34	65	86
Hosiery and knit goods	299	------	90	10	99	45	55	96
Silk goods	249	1	89	10	99	46	53	91
Woolen and worsted goods	173	2	79	19	97	35	64	86
Carpets and rugs	25	------	92	8	98	44	56	101
Dyeing and finishing	103	------	74	26	96	27	73	90
Clothing, men's	212	1	82	17	97	47	52	86
Shirts and collars	89	------	87	13	98	53	47	93
Clothing, women's	123	1	78	21	97	42	57	93
Millinery and lace goods	65	------	86	14	97	31	69	83
Iron and steel and their products	**1,714**	(1)	**77**	**23**	**97**	**42**	**58**	**91**
Iron and steel	167	2	71	26	95	28	69	86
Cast-iron pipe	33	------	42	58	75	9	91	76
Structural ironwork	158	------	88	12	99	50	50	100
Foundry and machine-shop products	964	(1)	76	24	97	41	59	93
Hardware	51	------	80	20	98	33	67	89
Machine tools	144	------	87	13	100	69	31	126
Steam fittings and steam and hot-water heating apparatus	100	------	64	36	95	30	70	81
Stoves	97	------	76	24	97	44	56	102
Lumber and its products	**1,211**	(1)	**84**	**16**	**98**	**36**	**63**	**87**
Lumber, sawmills	572	1	85	14	98	37	62	85
Lumber, mill work	277	------	73	27	97	23	77	74
Furniture	362	------	90	10	101	45	55	97
Leather and its products	**387**	(1)	**88**	**12**	**98**	**52**	**48**	**97**
Leather	117	------	93	7	99	44	56	88
Boots and shoes	270	(1)	86	14	98	56	44	100

[1] Less than 1 one-half of per cent.

TABLE 7.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN OCTOBER, 1929, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES—Continued

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Paper and printing	**924**		**93**	**7**	**100**	**56**	**44**	**100**
Paper and pulp	166		91	9	99	42	58	95
Paper boxes	158		90	10	100	49	51	99
Printing, book and job	301		92	8	100	50	50	100
Printing, newspapers	299		98	2	100	73	27	104
Chemicals and allied products	**297**		**80**	**20**	**96**	**24**	**76**	**83**
Chemicals	100		92	8	99	46	54	99
Fertilizers	159		67	33	93	8	92	55
Petroleum refining	38		100		100	32	68	84
Stone, clay, and glass products	**812**	**3**	**85**	**12**	**98**	**33**	**64**	**87**
Cement	96	2	97	1	100	31	67	81
Brick, tile, and terra cotta	499	4	82	14	97	27	69	82
Pottery	106	3	77	20	97	43	54	89
Glass	111	1	92	7	100	50	50	96
Metal products, other than iron and steel	**187**		**83**	**17**	**98**	**36**	**64**	**92**
Stamped and enameled ware	59		90	10	98	34	66	87
Brass, bronze, and copper products	128		80	20	98	37	63	96
Tobacco products	**216**	**1**	**75**	**25**	**96**	**38**	**61**	**95**
Chewing and smoking tobacco and snuff	22		82	18	97	45	55	82
Cigars and cigarettes	194	1	74	25	96	37	62	97
Vehicles for land transportation	**1,076**		**83**	**17**	**98**	**32**	**68**	**93**
Automobiles	177		71	29	93	36	64	99
Carriages and wagons	48		81	19	97	19	81	78
Car building and repairing, electric-railroad	348		81	19	99	45	55	91
Car building and repairing, steam-railroad	503		90	10	99	22	78	84
Miscellaneous industries	**385**	**1**	**82**	**17**	**98**	**47**	**52**	**99**
Agricultural implements	69	1	78	20	98	36	62	103
Electrical machinery, apparatus, and supplies	156		94	6	100	60	40	110
Pianos and organs	53		68	32	96	30	70	74
Rubber boots and shoes	8		63	38	92	75	25	98
Automobile tires	33	3	45	52	91	21	76	94
Shipbuilding	66	2	91	8	99	52	47	78
All industries	**10,454**	**1**	**84**	**16**	**98**	**40**	**59**	**92**

2. Employment in Coal Mining in October, 1929

THE seasonal increase in coal mining employment which began in August was continued in October, the increase over September having been 2.5 per cent. The 1,476 mines covered had in October 336,091 employees whose earnings in one week were $10,512,222.

Anthracite

EMPLOYMENT in anthracite mining in October increased 4.1 per cent, while pay-roll totals, owing to steadier operation, increased 28.9 per cent.

All anthracite mines covered are in Pennsylvania—the Middle Atlantic geographic division. Details for September and October are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ANTHRACITE MINES IN SEPTEMBER AND OCTOBER, 1929

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
Middle Atlantic [1]	**162**	**115,562**	**120,309**	**+4.1**	**$3,620,804**	**$4,667,597**	**+28.9**

[1] See footnote 5, p. 168.

Bituminous Coal

EMPLOYMENT in bituminous coal mining was 1.6 per cent greater in October than in September and pay-roll totals were 8.3 per cent higher, as shown by reports from 1,314 mines covering in October 215,782 employees whose earnings in one week were $5,844,625.

Six of the eight geographic divisions reported substantial increases in employment while there was practically no change in the South Atlantic and East South Central divisions, although they joined the other six divisions in showing very pronounced increases in pay-roll totals.

Details for each geographic division, except the New England division for which no coal mining is reported, are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL BITUMINOUS COAL MINES IN SEPTEMBER AND OCTOBER, 1929

Geographic division [1]	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
New England							
Middle Atlantic	395	63,565	65,024	+2.3	$1,637,300	$1,740,098	+6.3
East North Atlantic	180	32,434	32,821	+1.2	811,410	964,081	+18.8
West North Central	63	5,915	6,388	+8.0	142,806	169,107	+18.4
South Atlantic	322	52,804	52,814	+(2)	1,370,562	1,414,080	+3.2
East South Central	212	39,854	39,802	−0.1	850,065	901,137	+6.0
West South Central	30	2,579	2,789	+8.1	57,003	69,836	+22.5
Mountain	100	13,667	14,512	+6.2	472,251	523,542	+10.9
Pacific	12	1,580	1,632	+3.3	57,579	62,744	+9.0
All divisions	**1,314**	**212,398**	**215,782**	**+1.6**	**5,398,976**	**5,844,625**	**+8.3**

[1] See footnotes 4 to 12, p. 168. [2] Less than one-tenth of 1 per cent.

3. Employment in Metalliferous Mining in October, 1929

METALLIFEROUS mines in October showed a small decrease in employment with an increase of 1.1 per cent in pay-roll totals. The 342 mines covered had in October 63,178 employees whose earnings in one week were $1,933,040.

Details for each geographic division from which metalliferous mining is reported are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **METALLIFEROUS MINES** IN SEPTEMBER AND OCTOBER, 1929

Geographic division [1]	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
New England							
Middle Atlantic	5	900	892	−0.9	$26,605	$26,050	−2.1
East North Central	47	13,038	13,424	+3.0	350,975	369,811	+5.4
West North Central	55	8,302	8,284	−0.2	246,838	249,139	+0.9
South Atlantic							
East South Central	12	3,665	3,688	+0.6	75,401	79,531	+5.5
West South Central	66	4,294	4,100	−4.5	115,118	117,887	+2.4
Mountain	128	30,301	30,049	−0.8	1,008,283	1,002,628	−0.6
Pacific	29	2,823	2,741	−2.9	88,941	87,994	−1.1
All divisions	**342**	**63,323**	**63,178**	**−0.2**	**1,912,161**	**1,933,040**	**+1.1**

[1] See footnotes 4 to 12, p. 168.

4. Employment in Quarrying and Nonmetallic Mining in October, 1929

EMPLOYMENT in quarrying and nonmetallic mining in October was 2.8 per cent lower than in September, each of the nine geographic groups having shown a considerable decrease, except the West North Central and Pacific divisions which had gained employees. The 651 establishments covered reported 38,613 employees in October whose combined earnings in one week were $1,042,019.

Details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **QUARRIES AND NONMETALLIC MINES** IN SEPTEMBER AND OCTOBER, 1929

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
New England	94	5,381	5,363	−0.3	$160,777	$163,180	+1.5
Middle Atlantic	94	7,017	6,873	−2.1	211,764	205,206	−3.1
East North Central	202	11,119	10,543	−5.2	357,524	335,177	−6.3
West North Central	57	2,795	2,822	+1.0	74,103	71,451	−3.6
South Atlantic	95	6,160	5,905	−4.1	112,021	107,258	−4.3
East South Central	49	3,128	2,957	−5.5	52,462	51,831	−1.2
West South Central	30	2,561	2,481	−3.1	65,988	61,691	−6.5
Mountain	5	78	72	−7.7	1,775	1,705	−3.9
Pacific	25	1,487	1,597	+7.4	45,357	44,520	−1.8
All divisions	**651**	**39,726**	**38,613**	**−2.8**	**1,081,771**	**1,042,019**	**−3.7**

[1] See footnotes 4 to 12, p. 168.

5. Employment in Public Utilities in October, 1929

PUBLIC utility companies in October reported a decrease of 0.5 per cent in employment and an increase of 1.0 per cent in pay-roll totals. The 9,602 companies concerned had in October 734,224 employees whose earnings in one week were $21,897,914.

Details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **PUBLIC UTILITIES** ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1929

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
New England	396	41,921	41,688	−0.6	$1,371,921	$1,363,757	−0.6
Middle Atlantic	1,525	217,992	216,684	−0.6	6,710,197	6,793,470	+1.2
East North Central	1,698	196,163	195,026	−0.6	5,925,677	5,964,792	+0.7
West North Central	1,610	77,450	76,056	−1.8	2,111,690	2,079,353	−1.5
South Atlantic	870	55,952	56,569	+1.1	1,542,736	1,561,796	+1.2
East South Central	726	22,279	22,373	+0.4	516,163	532,402	+3.1
West South Central	1,023	40,275	40,161	−0.3	972,188	998,374	+2.7
Mountain	588	17,443	17,998	+3.2	486,148	495,931	+2.0
Pacific	1,166	68,645	67,669	−1.4	2,041,600	2,108,039	+3.3
All divisions	**9,602**	**738,120**	**734,224**	**−0.5**	**21,678,320**	**21,897,914**	**+1.0**

[1] See footnotes 4 to 12, p. 168.

6. Employment in Wholesale and Retail Trade in October, 1929

EMPLOYMENT in 7,658 establishments—wholesale and retail trade combined—showed a gain of 3.6 per cent in employment and a gain of 2.4 per cent in pay-roll totals in October as compared with September. These establishments in October had 303,266 employees whose combined earnings in one week were $7,690,956.

Wholesale Trade

EMPLOYMENT in wholesale trade alone increased 1.1 per cent in October while pay-roll totals decreased 0.6 per cent. Seven of the nine geographic divisions had more employees in October than in September, the East South Central and Mountain divisions having reported small decreases. The 1,890 establishments concerned had 64,216 employees in October, whose earnings in one week were $1,953,908.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **WHOLESALE TRADE** ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1929

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
New England	154	3,593	3,606	+0.4	$101,549	$102,853	+1.3
Middle Atlantic	321	9,756	9,914	+1.6	307,479	308,481	+0.3
East North Central	260	14,674	14,746	+0.5	458,747	454,250	−1.0
West North Central	213	11,990	12,153	+1.4	353,279	346,513	−1.9
South Atlantic	286	4,275	4,409	+3.1	127,280	130,768	+2.7
East South Central	57	1,945	1,942	−0.2	57,526	56,653	−1.5
West South Central	248	6,244	6,252	+0.1	177,878	179,441	+0.9
Mountain	67	1,540	1,477	−4.1	53,654	49,573	−7.6
Pacific	284	9,469	9,717	+2.6	327,326	325,376	−0.6
All divisions	**1,890**	**63,486**	**64,216**	**+1.1**	**1,964,718**	**1,953,908**	**−0.6**

[1] See footnotes 4 to 12, p. 168.

Retail Trade

EACH of the nine geographic divisions showed considerably increased employment in October in retail trade establishments, the net result having been a gain of 4.2 per cent. The 5,768 establishments reporting had in October 239,050 employees whose earnings in one week were $5,737,048.

Details by geographic divisions are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **RETAIL TRADE** ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1929

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
New England	79	12,645	13,071	+3.4	$320,836	$328,270	+2.3
Middle Atlantic	326	44,035	47,684	+8.3	1,169,138	1,253,535	+7.2
East North Central	2,209	79,990	82,120	+2.7	2,007,090	2,065,696	+2.9
West North Central	655	20,972	21,286	+1.5	456,218	448,738	−1.6
South Atlantic	882	18,068	19,228	+6.4	401,305	430,937	+7.4
East South Central	286	4,953	5,420	+9.4	99,286	105,721	+6.5
West South Central	132	8,962	9,275	+3.5	175,519	183,870	+4.8
Mountain	73	3,821	3,865	+1.2	75,258	76,790	+2.0
Pacific	1,036	35,883	37,101	+3.4	842,245	843,491	+0.1
All divisions	**5,768**	**229,329**	**239,050**	**+4.2**	**5,546,895**	**5,737,048**	**+3.4**

[1] See footnotes 4 to 12, p. 168.

7. Employment in Hotels in October, 1929

EMPLOYMENT in hotels decreased 2.1 per cent in October while pay-roll totals were unchanged. The three southern geographic divisions showed the influence of the approaching winter resort season with fairly *large increases*, while the western, northern, and eastern divisions reflected the closing of the summer resort season with *larger decreases*.

Per capita earnings, obtained by dividing the total number of employees into the total amount of pay roll, should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard to the value of board or room furnished employees, and of course no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only for one, two, or three meals, while the division of tips is made in many ways.

Per capita earnings are further reduced by the considerable amount of part-time employment in hotels caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL HOTELS IN SEPTEMBER AND OCTOBER, 1929

Geographic division [1]	Hotels	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
New England	121	11,004	10,058	−8.6	$173,175	$159,464	−7.6
Middle Atlantic	291	43,538	43,397	−0.3	762,967	772,457	+1.2
East North Central	319	33,434	33,071	−1.1	584,232	594,765	+1.8
West North Central	193	13,094	12,988	−0.8	189,221	190,956	+0.9
South Atlantic	151	11,350	11,755	+3.6	170,334	178,901	+5.0
East South Central	57	5,551	5,611	+1.1	69,601	74,754	+7.4
West South Central	93	7,586	7,694	+1.4	102,613	104,740	+2.1
Mountain	96	4,661	3,655	−21.6	80,496	62,233	−22.7
Pacific	314	17,916	16,736	−6.6	327,729	322,257	−1.7
All divisions	**1,635**	**148,134**	**144,965**	**−2.1**	**2,460,368**	**2,460,527**	+[2]

[1] See footnotes 4 to 12, p. 168.
[2] Less than one-tenth of 1 per cent.

8. Employment in Canning and Preserving in October, 1929

THE end of the late-summer early-autumn canning season was reflected in the 31.8 per cent decrease in employees and 35.3 per cent decrease in pay-roll totals in October in the canning and preserving industry.

Each geographic division reported large decreases in both items, these decreases having been greatest in the East and West North Central divisions.

Reports were received from 542 establishments having in October 55,260 employees with pay-roll totals of $930,792.

The details for each geographic division are shown in the table following.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL CANNING AND PRESERVING ESTABLISHMENTS IN SEPTEMBER AND OCTOBER, 1929

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		September, 1929	October, 1929		September, 1929	October, 1929	
New England	45	4,346	3,784	−12.9	$78,948	$61,673	−21.9
Middle Atlantic	51	13,728	10,827	−21.1	280,234	206,847	−26.2
East North Central	139	14,396	7,733	−46.3	214,596	119,226	−44.4
West North Central	43	5,134	1,752	−65.9	84,851	23,589	−72.2
South Atlantic	56	5,188	4,211	−18.8	67,262	49,055	−27.1
East South Central	21	1,249	1,020	−18.3	10,720	8,495	−20.8
West South Central	10	598	438	−26.8	3,779	3,319	−12.2
Mountain	34	4,834	2,633	−45.5	57,517	42,242	−26.6
Pacific	143	31,543	22,862	−27.5	640,481	416,346	−35.0
All divisions	**542**	**81,016**	**55,260**	**−31.8**	**1,438,388**	**930,792**	**−35.3**

[1] See footnotes 4 to 12, p. 168.

Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to September, 1929, on Class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON **CLASS I STEAM RAILROADS** IN THE UNITED STATES, JANUARY, 1923, TO SEPTEMBER, 1929

[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929
January	98.3	96.9	95.6	95.8	95.5	89.3	88.2
February	98.6	97.0	95.4	96.0	95.3	89.0	88.9
March	100.5	97.4	95.2	96.7	95.8	89.9	90.1
April	102.0	98.9	96.6	98.9	97.4	91.7	92.2
May	105.0	99.2	97.8	100.2	99.4	94.5	94.9
June	107.1	98.0	98.6	101.6	100.9	95.9	96.1
July	108.2	98.1	99.4	102.9	101.0	95.6	96.6
August	109.4	99.0	99.7	102.7	99.5	95.7	97.4
September	107.8	99.7	99.9	102.8	99.1	95.3	96.8
October	107.3	100.8	100.7	103.4	98.9	95.3	----------
November	105.2	99.0	99.1	101.2	95.7	92.9	----------
December	99.4	96.0	97.1	98.2	91.9	89.7	----------
Average	**104.1**	**98.3**	**97.9**	**100.0**	**97.5**	**92.9**	[1] **93.5**

[1] Average for 9 months.

Table 2 shows the total number of employees on the 15th day each of September, 1928, and August and September, 1929, and payroll totals for the entire month of each of the months considered, by principal occupational groups and various important occupations.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, SEPTEMBER 1928, AND AUGUST AND SEPTEMBER, 1929

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	September, 1928	August, 1929	September, 1929	September, 1928	August, 1929	September, 1929
Professional, clerical, and general	**271,510**	**272,653**	**272,427**	**$38,716,280**	**$40,544,538**	**$39,363,958**
Clerks	155,676	154,270	154,600	20,971,704	21,929,782	21,106,291
Stenographers and typists	24,588	24,787	24,850	3,136,328	3,284,615	3,193,815
Maintenance of way and structures	**438,817**	**477,724**	**462,241**	**39,531,677**	**46,743,927**	**42,214,702**
Laborers, extra gang and work train	74,849	93,332	87,306	5,702,790	7,947,370	6,750,927
Laborers, track, and roadway section	227,883	241,333	232,462	15,982,452	18,732,418	16,390,390
Maintenance of equipment and stores	**456,192**	**454,135**	**454,628**	**58,750,754**	**65,345,851**	**61,951,080**
Carmen	100,056	99,363	100,115	14,527,895	16,578,978	15,645,676
Machinists	54,902	54,118	54,318	8,393,924	9,406,443	8,915,507
Skilled trades helpers	100,131	101,547	101,408	10,865,291	12,608,426	11,882,283
Laborers (shops, engine houses, power plants, and stores)	37,352	36,952	36,909	3,492,359	3,641,387	3,502,330
Common laborers (shops, engine house, power plants, and stores)	51,981	52,588	52,421	4,044,994	4,479,537	4,152,445

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, SEPTEMBER, 1928, AND AUGUST AND SEPTEMBER, 1929—Continued

Occupation	Number of employees at middle of month			Total earnings		
	September, 1928	August, 1929	September, 1929	September, 1928	August, 1929	September, 1929
Transportation, other than train, engine, and yard	**200,432**	**197,992**	**199,430**	**$24,897,059**	**$25,776,403**	**$24,949,515**
Station agents	29,779	29,348	29,335	4,664,403	4,828,789	4,611,218
Telegraphers, telephoners, and towermen	23,461	23,300	23,309	3,578,341	3,707,194	3,585,440
Truckers (stations, warehouses, and platforms)	35,424	33,949	35,166	3,346,383	3,424,898	3,359,200
Crossing and bridge flagmen and gatemen	21,132	20,650	20,672	1,627,078	1,602,056	1,596,378
Transportation (yardmasters, switch tenders, and hostlers)	**22,072**	**21,930**	**21,860**	**4,318,821**	**4,461,158**	**4,320,331**
Transportation, train and engine	**316,967**	**318,150**	**320,254**	**65,603,565**	**69,074,672**	**67,176,243**
Road conductors	36,260	36,173	36,309	8,699,119	9,260,548	8,975,789
Road brakemen and flagmen	72,081	70,462	71,427	12,737,865	13,330,067	13,040,228
Yard brakemen, and yard helpers	51,994	53,607	53,880	9,420,835	10,090,000	9,811,474
Road engineers and motormen	42,860	42,483	42,897	12,061,045	12,407,967	12,108,676
Road firemen and helpers	43,522	42,842	43,200	8,905,004	9,134,093	8,912,909
All employees	**1,705,990**	**1,742,584**	**1,730,840**	**231,818,156**	**251,946,549**	**239,975,829**

Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

Monthly period

State, and industry group	Per cent of change, August to September, 1929		State, and industry group	Per cent of change, September to October, 1929	
	Employment	Pay roll		Employment	Pay roll
Illinois			**Iowa**		
Stone, clay, and glass products	−1.0	−3.5	Food and kindred products	+1.2	
Metals, machinery, and conveyances	−.2	−1.2	Textiles	+2.4	
Wood products	+4.0	+4.4	Iron and steel works	−1.4	
Furs and leather goods	−1.0	−4.3	Lumber products	+.02	
Chemicals, oils, paints, etc.	−3.0	−6.1	Leather products	+6.1	
Printing and paper goods	−.6	−.7	Paper products, printing, and publishing	+.8	
Textiles	+7.3	+1.6	Patent medicines, chemicals, and compounds	.0	
Clothing and millinery	−1.1	−5.4	Stone and clay products	−5.3	
Food, beverages, and tobacco	+7.4	+3.9	Tobacco and cigars	−1.5	
Miscellaneous	−8.8	−8.3	Railway-car shops	−1.3	
All manufacturing	+.7	−.9	Various industries	+1.0	
Trade, wholesale and retail	−.5	−1.6	All industries	+.1	
Services	−1.7	+.0	**Maryland**		
Public utilities	+.2	+14.5	Food products	+.8	+3.4
Coal mining	−.9	−6.7	Textiles	+1.8	−.3
Building and contracting	−3.1	−2.8	Iron and steel, and their products	−8.1	−9.5
All nonmanufacturing	−.3	−2.2	Lumber and its products	−.2	+1.0
All industries	+.4	−1.4	Leather and its products	−.3	−6.5

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, September to October, 1929	
	Employment	Pay roll
Maryland—Continued		
Rubber tires	−10.9	−12.5
Paper and printing	+1.4	+8.8
Chemicals and allied products	−1.3	+1.3
Stone, clay, and glass products	−6.4	+.02
Metal products, other than iron and steel	−.6	+1.1
Tobacco products	+.2	+12.5
Machinery (not including transportation equipment)	−2.9	+2.2
Musical instruments	+1.4	+12.5
Transportation equipment	−18.2	−21.9
Car building and repairing	−.3	+7.7
Miscellaneous	+15.2	+19.2
All manufacturing	−1.2	−.17
Retail department stores	+11.0	+9.7
Wholesale establishments	+.7	+2.1
Public utilities	−1.3	−5.8
Coal mines	−.4	+23.4
Hotels	+11.7	+16.6
Quarries	+4.7	−5.5

	Employment—index numbers (1919–1923=100)	
	August, 1929	September, 1929
Massachusetts		
Boots and shoes	67.0	71.3
Bread and other bakery products	110.6	110.9
Cars and general shop construction and repairs, steam railroads	70.2	69.9
Clothing, men's and women's	83.8	88.8
Confectionery	84.5	96.2
Cotton goods	55.8	55.5
Dyeing and finishing textiles	87.9	99.4
Electrical machinery, apparatus and supplies	109.2	109.7
Foundry and machine-shop products	72.2	73.9
Furniture	101.8	107.3
Hosiery and knit goods	68.6	71.9
Jewelry	98.7	105.8
Leather, tanned, curried and finished	87.9	88.4
Paper and wood pulp	93.7	93.1
Printing and publishing	107.0	111.4
Rubber footwear	94.7	98.0
Rubber goods, tires, and tubes	82.5	81.9
Silk goods	91.0	89.6
Textile machinery and parts	59.5	59.1
Woolen and worsted goods	77.3	79.1
All industries	77.8	79.8

State, and industry group	Per cent of change, August to September, 1929	
	Employment	Pay roll
New Jersey		
Food and kindred products	+23.9	+19.3
Textiles and their products	+5.7	+2.2
Iron and steel and their products	−1.0	+7.1
Lumber and its products	+1.6	+.8
Leather and its products	+1.5	+1.2
Tobacco products	+3.3	+1.2
Paper and printing	−2.2	−1.4
Chemicals and allied products	−.3	−2.1
Stone, clay, and glass products	−2.2	−5.8
Metal products, other than iron and steel	−.4	−10.2
Vehicles for land transportation	−8.0	−14.5
Miscellaneous	+.1	+2.1
All industries	+1.0	+.9
New York		
Stone, clay, and glass	−2.0	+1.4
Metals and machinery	+.3	+.7
Wood manufactures	+6.6	+11.0
Furs, leather, and rubber goods	+2.1	+3.3
Chemicals, oils, paints, etc.	+1.5	+1.2
Paper	(1)	+1.3
Printing and paper goods	+2.2	+4.4
Textiles	+1.6	+5.2
Clothing and millinery	+5.3	+6.5
Food and tobacco	+3.8	+7.4
Water, light, and power	−.7	−.6
All industries	+1.9	+3.2

	September to October, 1929	
Oklahoma		
Cottonseed-oil mills	+64.4	+63.4
Food production:		
Bakeries	+22.6	+27.5
Confections	+54.9	+44.1
Creameries and dairies	+1.6	−.4
Flour mills	+1.2	+8.8
Ice and ice cream	−23.9	−20.0
Meat and poultry	+4.9	−.3
Lead and zinc:		
Mines and mills	−4.2	+10.1
Smelters	−1.1	+9.4
Metals and machinery:		
Auto repairs, etc.	+9.0	+24.2
Machine shops and foundries	−1.6	+8.6
Tank construction and erection	−5.4	−25.7
Oil industry:		
Producing and gasoline manufacture	−.1	−10.7
Refineries	−1.5	+9.3
Printing: Job work	+.7	+.1

[1] Less than 0.05 per cent change.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, September to October, 1929	
	Employment	Pay roll
Oklahoma—Continued		
Public utilities:		
Steam-railway shops	+0.9	+5.8
Street railways	−3.8	+18.4
Water, light, and power	+13.5	+2.9
Stone, clay, and glass:		
Brick and tile	−1.1	+9.9
Cement and plaster	−1.2	+2.0
Crushed stone	−1.0	+.6
Glass manufacture	+5.8	+1.1
Textiles and cleaning:		
Textile manufacture	+5.6	+4.8
Laundries, etc	−1.5	+2.8
Woodworking:		
Sawmills	−3.5	+3.3
Millwork, etc	+3.8	−10.3
All industries	+.9	+3.7
	Index numbers (1923–1925=100)—employment	
	September, 1929	October, 1929
Pennsylvania		
Metal products	97.7	94.9
Transportation equipment	77.5	[2] 75.4
Textile products	102.6	104.5
Foods and tobacco	100.4	104.5
Stone, clay, and glass products	86.6	84.5
Lumber products	82.8	80.7
Chemical products	105.7	105.7
Leather and rubber products	102.9	104.6
Paper and printing	95.4	97.3
All manufacturing	97.0	96.1
	Pay roll	
Metal products	103.9	104.4
Transportation equipment	74.8	[2] 77.8
Textile products	110.4	116.4
Foods and tobacco	103.1	108.9
Stone, clay, and glass products	79.4	83.8
Lumber products	84.3	86.2
Chemical products	113.5	117.9
Leather and rubber products	107.3	112.2
Paper and printing	115.6	115.4
All manufacturing	101.5	103.9

State, and industry group	Per cent of change, August to September, 1929	
	Employment	Pay roll
Wisconsin		
Manual		
Logging	+4.7	+12.0
Mining:		
Lead and zinc	+7.6	−4.7
Iron	+.7	−12.3
Stone crushing and quarrying	−2.5	−12.0
Manufacturing:		
Stone and allied industries	−7.6	−10.3
Metal	−2.3	−7.4
Wood	−1.5	−7.2
Rubber	+3.4	−1.1
Leather	+.4	−2.9
Paper	+2.4	−1.7
Textiles	+2.2	+.7
Foods	−6.3	−9.9
Printing and publishing	+.5	+2.2
Chemicals (including soap, glue, and explosives)	+2.2	−5.9
All manufacturing	−1.5	−5.8
Construction:		
Building	−2.2	+3.1
Highway	−12.9	−22.5
Railroad	−8.6	−9.5
Marine dredging, sewer digging	+33.3	+37.2
Communication:		
Steam railways	+3.3	+2.7
Electric railways	−5.5	−6.8
Express, telephone, and telegraph	+3.5	+9.4
Light and power	+.4	−3.2
Wholesale trade	−3.1	+2.8
Hotels and restaurants	−3.7	
Laundering, cleaning, and dyeing	−.5	−.6
Nonmanual		
Construction	−3.1	−1.8
Communication	−.5	−2.3
Wholesale trade	+4.1	+3.6
Retail trade—sales force only	+6.0	+5.2
Miscellaneous professional services	+1.8	+2.7

[2] Preliminary figures.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period

State, and industry group	Per cent of change, September, 1928, to September, 1929	
	Employment	Pay roll
California		
Stone, clay, and glass products	−3.9	−5.3
Metals, machinery, and conveyances	+13.0	+12.1
Wood manufactures	−6.4	−12.5
Leather and rubber goods	−4.6	−9.5
Chemicals, oils, paints, etc	+5.0	+6.6
Printing and paper goods	+9.1	+7.8
Textiles	+1.9	+3.9
Clothing, millinery, and laundering	+6.2	+6.9
Foods, beverages, and tobacco	−7.7	−4.4
Water, light, and power	+13.6	+11.8
Miscellaneous	+32.6	+37.9
All industries	+2.3	+2.5

State, and industry group	Employment—index numbers (1925–1927=100)	
	September, 1928	September, 1929
Illinois		
Stone, clay, and glass products	121.7	91.0
Metals, machinery, and conveyances	107.0	116.0
Wood products	78.7	76.1
Furs and leather goods	112.6	107.3
Chemicals, oils, paints, etc	124.5	102.1
Printing and paper goods	116.2	102.1
Textiles	105.9	98.4
Clothing and millinery	62.4	81.7
Foods, beverages, and tobacco	94.6	104.7
All manufacturing	95.8	105.8
Trade, wholesale and retail	66.3	87.5
Public utilities	141.2	107.4
Coal mining	47.8	75.3
Building and contracting	138.6	84.9
All industries	101.3	103.3

	(1919–1923=100)	
Massachusetts		
Boots and shoes	71.8	71.3
Bread and other bakery products	106.1	110.9
Cars and general shop construction and repairs, steam railroads	70.3	69.9
Clothing, men's and women's	91.6	88.8
Confectionery	91.4	96.2
Cotton goods	42.2	55.5
Dyeing and finishing	98.3	99.4
Electrical machinery, apparatus, and supplies	107.1	109.7

State, and industry group	Employment—index numbers (1919–1923=100)	
	September, 1928	September, 1929
Massachusetts—Contd.		
Foundry and machine-shop products	66.6	73.9
Furniture	103.5	107.3
Hosiery and knit goods	67.6	71.9
Jewelry	106.1	105.8
Leather, tanned, curried, and finished	83.1	88.4
Paper and wood pulp	90.9	93.1
Printing and publishing	106.6	111.4
Rubber footwear	97.6	98.0
Rubber goods, tires, and tubes	91.9	81.9
Silk goods	102.3	89.6
Textile machinery and parts	51.3	59.1
Woolen and worsted goods	76.3	79.1
All industries	75.6	79.8

	Per cent of change, September, 1928, to September, 1929	
New York	Employment	Pay roll
Stone, clay, and glass	−1.1	−0.3
Metals and machinery	+11.8	+13.6
Wood manufactures	−2.2	+1.2
Furs, leather, and rubber goods	+7.7	+9.6
Chemicals, oils, paints, etc	+9.4	+12.0
Paper	+2.8	+6.8
Printing and paper goods	+5.2	+8.1
Textiles	+2.2	+4.5
Clothing and millinery	+4.1	+7.5
Food and tobacco	−4.1	−1.6
Water, light, and power	−4.6	−4.2
All industries	+6.0	+8.7

	October, 1928, to October, 1929	
Oklahoma		
Cottonseed-oil mills	−12.8	−12.2
Food production:		
Bakeries	+25.3	+8.9
Confections	+3.9	+8.3
Creameries and dairies	+24.5	+49.5
Flour mills	+19.8	+20.9
Ice and ice cream	+6.0	+6.5
Meat and poultry	+3.7	+.4
Lead and zinc:		
Mines and mills	+20.5	+40.4
Smelters	−11.0	−4.7
Metals and machinery:		
Auto repairs, etc	+42.6	+65.2
Machine shops and foundries	+17.1	+28.0
Tank construction and erection	+.3	−14.5

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period—Continued

State, and industry group	Per cent of change, October, 1928, to October, 1929	
	Employment	Pay roll
Oklahoma—Continued		
Oil industry:		
Producing and gasoline manufacture	+38.9	+26.6
Refineries	+13.0	+20.9
Printing: Job work	+4.9	+5.7
Public utilities:		
Steam-railway shops	+2.3	−7.6
Street railways	+4.8	+9.9
Water, light, and power	+97.9	+55.5
Stone, clay, and glass:		
Brick and tile	+14.3	−8.7
Cement and plaster	−1.4	−5.0
Crushed stone	+280.2	+160.6
Glass manufacture	−12.1	−18.9
Textiles and cleaning:		
Textile manufacture	+14.1	+26.0
Laundries, etc	−1.1	+10.9
Woodworking:		
Sawmills	−.8	+13.3
Millwork, etc	−7.9	−5.1
All industries	+20.8	+21.3

State, and industry group	Index numbers (1923–1925=100)—employment	
	October, 1928	October, 1929
Pennsylvania		
Metal products	88.3	94.6
Transportation equipment	73.5	[a] 75.4
Textile products	96.4	104.5
Foods and tobacco	102.1	104.5
Stone, clay, and glass products	81.8	84.5
Lumber products	85.3	80.7
Chemical products	97.8	105.7
Leather and rubber products	97.2	104.6
Paper and printing	94.2	97.3
All industries	87.5	96.1
	Pay roll	
Metal products	97.3	104.4
Transportation equipment	77.9	[a] 77.8
Textile products	107.6	116.4
Foods and tobacco	104.3	108.9
Stone, clay, and glass products	86.8	83.8
Lumber products	92.1	86.2
Chemical products	107.0	117.9
Leather and rubber products	104.0	112.2
Paper and printing	109.2	115.4
All industries	94.2	103.9

[a] Preliminary figures.

Help-Wanted Advertising as an Indicator of the Demand for Labor

IN A survey made by the associate director of the industrial research department of the Wharton School of Finance and Commerce, University of Pennsylvania,[2] help-wanted advertising has been studied with a view to ascertaining the relation of such advertising to the trend of the labor market. The author states that the study has two objectives, the first being to add to the available data for appraising the demand for labor, and the second to explore some of the ways of using this additional information in connection with training.

Advertising linage used in the study was obtained from the help-wanted columns of Philadelphia, Chicago, Indianapolis, Minneapolis, and St. Louis newspapers. The record covers the years 1923 to 1928, inclusive, for all cities, with additional figures for certain cities during 1922 and 1929. A more complete statistical analysis is attempted of the Philadelphia material than of that for the other cities, the Philadelphia linage having been analyzed for each of several major industries and occupations while that for other cities is considered from the standpoint of total linage only.

[2] Bezanson, Anne: Help-Wanted Advertising as an Indicator of the Demand for Labor. Philadelphia, 1929.

Help-wanted advertising in Philadelphia during the past two years is found to have been moderate. The low levels in these years have had no parallel, even in the depression of 1924. Although the trend in 1929 has been upward, the index still lags below indexes for corresponding months in earlier years. Advertising for domestic help fluctuates more violently than for any other kind of help, showing the unstable character of domestic employment.

The report also shows that the industry with the highest percentage of total employees does not necessarily resort to most advertising for help. For instance, the textile industry with 34.5 per cent of all employees engaged in manufacture in Philadelphia in 1921, according to the department of internal affairs, used only 3 per cent of the total advertising linage in 1926. At most, not more than 40 help-wanted lines out of every thousand in the Philadelphia papers were supplied by textile concerns in a heavy advertising year, 1923.

The figures show that advertising for common labor has declined greatly in Philadelphia. At the beginning of the period under consideration, namely 1923, 41 lines out of every thousand were advertisements for common labor. In 1929 the number had fallen to 11 per thousand. The demand for common labor, as reflected in advertising, has become progressively lower. In times of depression the demand for laborers has fallen off relatively more than the total advertising and in times of business activity demand for laborers has not expanded as much as for other industries.

Comparing advertising linage in the five cities for which figures were obtained, the author concludes that employers resort to help-wanted advertising in about the same way. In 1923 the volume of advertising was exceptionally high in all centers. The fluctuations during periods of activity and recessions in subsequent years have been strikingly similar in all five cities, as shown in the table following:

AVERAGE WEEKLY NUMBER OF LINES OF HELP-WANTED ADVERTISING ANNUALLY, BY CITIES, 1922 TO 1929

Newspaper	1922	1923	1924	1925	1926	1927	1928	1929 [1]
Chicago Tribune	----	47,203	30,114	38,977	42,563	34,984	29,746	----
Indianapolis News	7,762	8,865	4,737	5,325	5,559	4,036	3,763	----
Minneapolis Tribune	9,841	9,351	7,067	7,241	7,446	6,531	6,877	----
Philadelphia Inquirer, Evening Bulletin, and Public Ledger	----	61,393	36,380	42,556	48,611	31,967	29,129	32,173
St. Louis Globe-Democrat	9,447	10,138	5,993	6,485	5,949	4,608	4,437	----

[1] 6 months' average.

Similarity in increases and decreases in amount of advertising linage are considered especially striking since no attempt was made to choose areas engaged in like industries.

As between sexes the total help-wanted advertising was found to be two-thirds for men and one-third for women, Minneapolis regularly maintaining the highest proportion of advertising for women. In Philadelphia, advertising increased more rapidly for women than for men during busy periods. This led the author of the study to raise a question as to whether jobs ordinarily open to men are made available to women in times of active business or whether women were

harder to secure for employment when full-time employment of men makes financial need less acute than in slack times.

Touching upon the value of studies of advertising linage as it relates to the demand for labor, the author states that such studies are an objective measure of changes in the unfilled demand for workers both in the market as a whole and in specific occupations. Granting that a single advertisement may represent a need for a number of workers or for only one and therefore may not be used as a quantitative measure, advertising is still a barometer indicating to the executive the tendencies in demand for the present and the long run. Moreover, knowledge obtained through a study of advertising may give invaluable help to those persons responsible for vocational guidance and training in directing young persons to enter occupations in which a scarcity of labor exists.

Local Surveys of Unemployment—Cincinnati and Buffalo

Cincinnati

AS PART of its program for stabilizing employment, noted in a previous issue of the Labor Review, the Cincinnati department of public welfare in cooperation with the public-school authorities made a survey of the unemployed in that city in May, 1929.

The survey disclosed a total of 106,353 "employables" within the city limits, of whom 94,187 (88.6 per cent) had regular employment, 5,612 (5.3 per cent) had only part-time employment, and 6,317 (5.9 per cent) were unemployed. The per cent of employables who were out of work ranged in the various wards from 1.4 to 26.8, showing, according to the report, a correlation between the wards where the percentage of unemployment was the highest and where also the economic status "is known to be very low." In 6 of the 26 wards of the city, the number of unemployed formed 10 per cent or more of the total number of employables.

Buffalo

THE United States Daily for November 6, 1929, states that a house-to-house survey of unemployment is being conducted under the auspices of the State department of labor. The actual canvass will be made by 100 students from the New York State Teachers' College and the University of Buffalo. The attempt will be made to find out the period of idleness and the cause of unemployment in each case, but part-time workers will not be included in the survey.

Occupational Distribution of Denver High-School Graduates

RESULTS of a study of occupational distribution of Denver high-school graduates of the classes of 1928 and 1929 are published in the September, 1929, issue of the University of Denver Business Review, as of August, 1929. Information was obtained covering 445 boys and 583 girls, or 65 and 67 per cent, respectively, of the 685 boys and 866 girls in the graduating class of 1928. For

1929 a higher proportion of graduates supplied the required information, that is, of the class aggregating 1,302 students, comprising 536 boys and 766 girls, 470 boys, or 87 per cent, and 701 girls, or 91 per cent, were reported on.

For purposes of comparison the percentage distribution of students in each class is reproduced according to occupation in Table 1.

TABLE 1.—STATUS OF 1929 AND 1928 DENVER HIGH-SCHOOL GRADUATES, AS OF AUGUST, 1929

	Per cent of total			
	Boys		Girls	
	1929	1928	1929	1928
Entering college	56.2	41.1	44.1	36.0
Employed	29.1	45.0	23.5	36.0
Unemployed	6.4	4.5	12.8	7.7
Entering business and vocational schools	3.2	5.8	10.5	5.8
Entering fine-art schools	.2	.9	1.9	.7
Taking nurses training			2.6	4.3
Married		(1)	1.3	5.5
Moved out of State	3.2	2.2	2.6	3.6
Taking post-graduate courses	1.7	.5	.7	
Died				.4
Total	100.0	100.0	100.0	100.0

[1] Of the boys included in the employed class 0.9 per cent were married.

Attention is drawn to the fact that the percentage of 1928 graduates entering college compares favorably with the percentage of 1929 graduates; and it is stated that several members of the class of 1928 are entering college this fall as freshmen, having tried business employment or having stayed at home for a year. Of the students seeking further training outside colleges those entering business schools represent the majority.

In analyzing the relatively greater unemployment among members of the class of 1929 than among those of the previous class, attention is drawn to the fact that members of the earlier class have had a year during which they might avail themselves of vocational training rather than remain unemployed.

Table 2, covering the occupational distribution of employed graduates, indicates that members of the 1928 class have actually secured special training whereby they have been enabled to leave the ranks of the unskilled.

TABLE 2.—OCCUPATION OF 1929 AND 1928 DENVER HIGH-SCHOOL GRADUATES AS OF AUGUST, 1929

Occupation	Per cent of total employed boys		Occupation	Per cent of total employed girls	
	1929	1928		1929	1928
Unskilled manual laborers	20.4	12.2	Typists	12.7	3.3
Skilled workers	13.1	21.4	Stenographers	15.9	23.3
Salesmen	21.3	19.5	Comptometer and dictaphone operators	2.4	3.3
Office assistants	16.1	23.5	Bookkeepers	2.4	4.3
Runners and messengers	3.6	4.6	General office clerks	29.1	24.4
Porters and bell boys	3.6	1.5	Sales clerks	21.2	12.9
Ushers	1.5	2.0	Domestic help	1.8	2.4
Shipping clerks	2.9	1.5	Doctor's assistants	3.0	3.3
Stock boys	2.9	2.0	Telephone operators	.6	9.5
Deliverymen	2.9	2.6	Telegraph and PBX operators	1.2	2.4
Filling-station attendants	4.4	2.6	Librarians	1.8	1.9
All others	7.3	6.6	All others	7.9	9.0
Total employed	100.0	100.0	Total employed	100.0	100.0

It is concluded that—

The casualness of the employments in which many of the graduates are found, together with the number of those who would take employment sooner than they do, if the opportunity were present, suggests the need of stimulating two lines of endeavor which undoubtedly have already been under consideration by high-school authorities. First, there is apparent need for more direct guidance of the high-school student toward a vocation, by both the high school and the parent—not as an incident of putting the boy or girl through high school, but as a factor equally important with the provisions for formal teaching of subjects. Secondly, there seems to be need for a continuing contact between the educational system and the local business institutions; the business world requires to be made conscious of the fact that it must normally absorb the annual increment of novices from the high schools, so that it may prepare to make room for them.

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices [1] received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food October 15, 1928, September 15 and October 15, 1929, as well as the percentage changes in the year and in the month. For example the retail price per pound of hens was 37.9 cents on October 15, 1928; 39.2 cents on September 15, 1929; and 38.4 cents on October 15, 1929. These figures show an increase of 1 per cent in the year and a decrease of 2 per cent in the month.

The cost of various articles of food combined shows an increase of 2.3 per cent October 15, 1929, as compared with October 15, 1928, and a decrease of 0.2 per cent October 15, 1929, as compared with September 15, 1929.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE OCTOBER 15, 1929, COMPARED WITH SEPTEMBER 15, 1929, AND OCTOBER 15, 1928

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail prices on—			Per cent of increase (+) or decrease (−) Oct. 15, 1929, compared with—	
		Oct. 15, 1928	Sept. 15, 1929	Oct. 15, 1929	Oct. 15, 1928	Sept. 15, 1929
		Cents	*Cents*	*Cents*		
Sirloin steak	Pound	50.3	51.5	50.3	0	−2
Round steak	do	44.6	46.1	44.5	−0.2	−3
Rib roast	do	36.8	37.5	37.0	+1	−1
Chuck roast	do	30.2	30.7	30.0	−1	−2
Plate beef	do	20.8	21.2	21.0	+1	−1
Pork chops	do	37.6	40.7	38.9	+3	−4
Bacon, sliced	do	45.3	44.4	43.7	−4	−2
Ham, sliced	do	55.6	56.4	55.1	−1	−2
Lamb, leg of	do	38.8	39.5	38.5	−1	−3
Hens	do	37.9	39.2	38.4	+1	−2
Salmon, canned, red	do	32.6	31.8	31.9	−2	+0.3
Milk, fresh	Quart	14.2	14.3	14.4	+1	+1
Milk, evaporated	16-oz. can	11.3	10.7	10.6	−6	−1
Butter	Pound	57.5	54.8	55.7	−3	+2
Oleomargarine (all butter substitutes)	do	27.6	27.1	27.0	−2	−0.4

[1] In addition to monthly retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE OCTOBER 15, 1929, COMPARED WITH SEPTEMBER 15, 1929, AND OCTOBER 15, 1928—Continued

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail prices on—			Per cent of increase (+) or decrease (−) Oct. 15, 1929, compared with—	
		Oct. 15, 1928	Sept. 15, 1929	Oct. 15, 1929	Oct. 15, 1928	Sept. 15, 1929
		Cents	*Cents*	*Cents*		
Cheese	Pound	38.8	38.0	37.9	−2	−0.3
Lard	do	19.5	18.5	18.3	−6	−1
Vegetable lard substitute	do	24.9	24.7	24.7	−1	0
Eggs, strictly fresh	Dozen	54.3	53.0	58.0	+7	+9
Bread	Pound	9.1	9.0	8.9	−2	−1
Flour	do	5.2	5.3	5.2	0	−2
Corn meal	do	5.3	5.3	5.3	0	0
Rolled oats	do	8.9	8.9	8.8	−1	−1
Corn flakes	8-oz. package	9.5	9.5	9.5	0	0
Wheat cereal	28-oz. package	25.6	25.5	25.5	−0.4	0
Macaroni	Pound	19.7	19.6	19.7	0	+1
Rice	do	9.9	9.7	9.7	−2	0
Beans, navy	do	12.5	14.5	14.2	+14	−2
Potatoes	do	2.2	3.9	3.8	+73	−3
Onions	do	6.1	5.7	5.3	−13	−7
Cabbage	do	4.3	5.1	4.5	+5	−12
Beans, baked	No. 2 can	11.6	11.8	11.7	+1	−1
Corn, canned	do	15.9	15.8	15.8	−1	0
Peas, canned	do	16.7	16.6	16.7	0	+1
Tomatoes, canned	do	11.8	12.9	12.6	+7	−2
Sugar	Pound	6.9	6.7	6.7	−3	0
Tea	do	77.5	77.6	77.6	+0.1	0
Coffee	do	49.6	49.2	49.1	−1	−0.2
Prunes	do	13.8	15.9	17.0	+23	+7
Raisins	do	12.4	12.0	12.2	−2	+2
Bananas	Dozen	33.1	32.1	32.5	−2	+1
Oranges	do	64.2	44.2	44.9	−30	+2
Weighted food index					+2.3	−0.2

Table 2 shows for the United States average retail prices of specified food articles on October 15, 1913, and on October 15 of each year from 1923 to 1929, together with percentage changes in October of each of these specified years, compared with October, 1913. For example, the retail price per pound of round steak was 23.1 cents in October, 1913; 34.4 cents in October, 1923; 33.7 cents in October, 1924; 35.4 cents in October, 1925; 36.0 cents in October, 1926; 37.9 cents in October, 1927; 44.6 cents in October, 1928; and 44.5 cents in October, 1929.

As compared with October, 1913, these figures show increases of 49 per cent in October, 1923; 46 per cent in October, 1924; 53 per cent in October, 1925; 56 per cent in October, 1926; 64 per cent in October, 1927; and 93 per cent in October, 1928, and October, 1929.

The cost of the various articles of food combined showed an increase of 54.4 per cent in October, 1929, as compared with October, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OCTOBER 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH OCTOBER 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Average retail price on Oct. 15—								Per cent of increase Oct. 15 of each specified year compared with Oct. 15, 1913						
	1913	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.							
Sirloin steak...pound	25.7	40.1	39.6	41.2	41.5	43.7	50.3	50.3	56	54	60	61	70	96	96
Round steak...do	23.1	34.4	33.7	35.4	36.0	37.9	44.6	44.5	49	46	53	56	64	93	93
Rib roast...do	20.0	28.9	28.6	30.0	30.6	31.9	36.8	37.0	45	43	50	53	60	84	85
Chuck roast...do	16.4	20.8	20.7	22.0	22.8	24.3	30.2	30.0	27	26	34	39	48	84	83
Plate beef...do	12.3	13.1	13.1	14.1	14.6	15.8	20.8	21.0	7	7	15	19	28	69	71
Pork chops...do	22.6	34.2	37.5	39.1	42.6	41.5	37.6	38.9	51	66	73	88	84	66	72
Bacon, sliced...do	27.8	39.3	40.1	49.6	51.7	46.6	45.3	43.7	41	44	78	86	68	63	57
Ham, sliced...do	27.6	46.4	47.1	54.3	59.8	53.6	55.6	55.1	68	71	97	117	94	101	100
Lamb, leg of...do	18.4	36.5	35.9	38.4	38.3	38.2	38.8	38.5	98	95	109	108	108	111	109
Hens...do	21.2	34.8	35.1	36.5	37.6	35.7	37.9	38.4	64	66	72	77	68	79	81
Salmon, canned, red ...pound		31.4	31.5	35.5	35.6	34.4	32.6	31.9							
Milk, fresh...quart	9.0	14.1	13.9	14.3	14.0	14.2	14.2	14.4	57	54	59	56	58	58	60
Milk, evaporated ...16-ounce can		12.2	11.0	11.5	11.4	11.5	11.3	10.6							
Butter...pound	38.2	56.2	47.9	59.4	54.3	55.7	57.5	55.7	47	25	55	42	46	51	46
Oleomargarine (all butter substitutes) ...pound		28.7	30.0	30.9	30.3	27.9	27.6	27.0							
Cheese...do	22.4	38.5	34.8	37.2	36.7	38.3	38.8	37.9	72	55	66	64	71	73	69
Lard...do	16.0	18.6	21.4	24.1	21.9	19.6	19.5	18.3	16	34	51	37	23	22	14
Vegetable lard substitute...pound		23.5	25.5	25.9	25.7	25.2	24.9	24.7							
Eggs, strictly fresh ...dozen	41.6	54.6	59.7	60.3	58.2	56.6	54.3	58.0	31	44	45	40	36	31	39
Bread...pound	5.6	8.7	8.8	9.4	9.4	9.3	9.1	8.9	55	57	68	68	66	63	59
Flour...do	3.3	4.6	5.3	5.9	5.7	5.5	5.2	5.2	39	61	79	73	67	58	58
Corn meal...do	3.1	4.3	5.0	5.3	5.1	5.2	5.3	5.3	39	61	71	65	68	71	71
Rolled oats...do		8.8	8.9	9.2	9.1	9.0	8.9	8.8							
Corn flakes ...8-ounce package		9.7	10.5	11.0	10.9	9.7	9.5	9.5							
Wheat cereal ...28-ounce package		24.4	24.4	25.1	25.4	25.5	25.6	25.5							
Macaroni...pound		19.7	19.5	20.5	20.1	20.1	19.7	19.7							
Rice...do	8.7	9.6	10.4	11.3	11.6	10.5	9.9	9.7	10	20	30	33	21	14	11
Beans, navy...do		10.6	10.1	10.0	9.1	9.6	12.5	14.2							
Potatoes...do	1.8	2.9	2.4	3.7	3.8	3.0	2.2	3.8	61	33	106	111	67	22	111
Onions...do		6.3	5.2	5.8	5.0	5.0	6.1	5.3							
Cabbage...do		4.2	3.9	4.2	4.0	3.9	4.3	4.5							
Beans, baked ...No. 2 can		12.9	12.6	12.3	11.7	11.5	11.6	11.7							
Corn, canned...do		15.5	16.3	17.4	16.3	15.7	15.9	15.8							
Peas, canned...do		17.6	18.2	18.2	17.4	16.7	16.7	16.7							
Tomatoes, canned ...No. 2 can		12.9	13.5	13.1	12.1	11.9	11.8	12.6							
Sugar, granulated ...pound	5.5	10.6	8.8	6.8	7.1	7.2	6.9	6.7	93	60	24	29	31	25	22
Tea...do	54.5	70.0	71.8	75.8	77.3	77.5	77.5	77.6	28	32	39	42	42	42	42
Coffee...do	29.7	37.8	46.1	51.1	50.9	47.4	49.6	49.1	27	55	72	71	60	67	65
Prunes...do		18.3	17.3	17.2	16.9	14.6	13.8	17.0							
Raisins...do		16.8	15.0	14.3	14.8	14.2	12.4	12.2							
Bananas...dozen		38.3	36.1	35.1	34.9	33.9	33.1	32.5							
Oranges...do		51.1	50.6	64.6	56.0	57.8	64.2	44.9							
All articles combined [1]									44.2	43.2	55.5	54.1	50.3	51.0	54.4

[1] Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years, from 1913 to 1928, and by months for 1927, 1928, and 1929. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO OCTOBER, 1929

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year	100.0	100.0	100.0	1928: Average for year	167.2	179.2	150.0
1914: Average for year	106.7	103.4	97.1	January	168.0	168.3	152.2
1915: Average for year	121.6	99.6	96.1	February	168.0	167.8	150.7
1916: Average for year	126.8	108.2	103.2	March	166.8	167.1	150.7
1917: Average for year	186.5	137.0	127.6	April	167.2	170.3	147.8
1918: Average for year	194.3	172.8	153.4	May	168.3	175.4	147.3
1919: Average for year	198.0	184.2	176.6	June	169.8	177.7	146.1
1920: Average for year	232.1	185.7	185.1	July	169.3	184.4	147.1
1921: Average for year	179.8	158.1	149.5	August	168.2	189.5	148.3
1922: Average for year	159.3	150.3	135.9	September	166.7	195.8	151.2
1923: Average for year	156.9	149.0	147.6	October	165.9	188.9	151.1
1924: Average for year	160.4	150.2	142.8	November	165.3	184.9	152.5
1925: Average for year	176.2	163.0	147.1	December	164.2	179.1	153.5
1926: Average for year	175.5	171.3	145.5	1929:			
1927: Average for year	170.7	169.9	148.7	January	164.1	180.9	151.9
January	172.8	168.1	151.4	February	164.1	180.3	152.6
February	172.7	167.6	151.8	March	164.1	182.8	152.4
March	172.1	168.5	152.2	April	164.1	187.5	148.9
April	171.7	170.6	150.8	May	163.5	191.2	147.5
May	171.6	170.7	145.3	June	163.0	192.4	146.8
June	170.7	168.3	143.7	July	163.5	195.9	146.8
July	170.6	169.3	143.9	August	164.7	196.0	147.1
August	171.2	171.0	144.5	September	165.2	194.2	148.1
September	170.6	173.0	146.6	October	163.5	189.2	149.3
October	170.5	173.7	149.4				
November	169.8	169.9	150.2				
December	168.6	168.1	152.8				

Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years for 1913 and 1920 to 1928,[2] and by months for 1928 through October, 1929. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1928 was 188.2, which

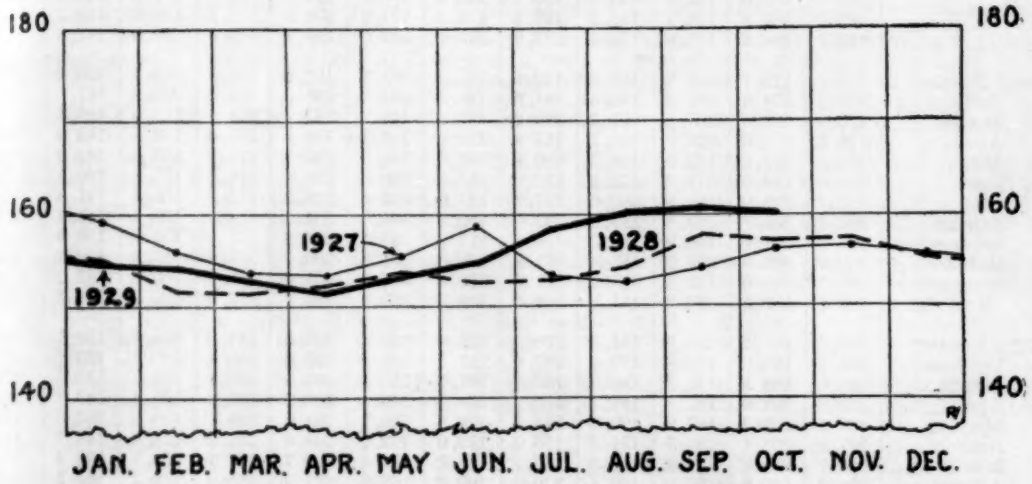
[2] For index numbers of each month, January, 1913, to December, 1927, see Bulletin No. 396, pp. 44 to 61; Bulletin No. 418, pp. 38 to 51; Bulletin No. 445, pp. 36 to 49; and Bulletin No. 464, pp. 36 to 49.

means that the average money price for the year 1928 was 88.2 per cent higher than the average money price for the year 1913. As compared with the relative price, 167.7 in 1927, the figures for 1928 show an increase of 20½ points, but an increase of 12.2 per cent in the year.

In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the

TREND OF RETAIL PRICES OF FOOD

[1913=100]



average prices of the article of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100 are 160.8 for September, 1929, and 160.5 for October, 1929.

The curve shown in the accompanying chart pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1928, AND BY MONTHS FOR JANUARY, 1928, THROUGH OCTOBER, 1929

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1928: January	174.8	173.1	165.2	158.8	142.1	149.0	165.2	192.2	172.8	160.7	150.9	177.4
February	176.4	174.4	167.2	160.6	144.6	140.5	161.9	190.3	174.6	160.7	147.0	177.4
March	176.8	175.3	167.2	161.3	146.3	136.2	159.3	187.7	174.6	159.6	149.6	174.2
April	178.3	177.6	168.7	163.1	147.9	149.0	158.9	188.1	177.0	158.4	143.9	172.9
May	181.5	181.2	172.2	166.3	150.4	168.6	159.6	190.3	177.0	158.4	142.6	172.4
June	186.6	186.5	175.3	172.5	152.9	165.7	160.0	192.2	174.2	157.3	140.7	172.4
July	195.7	196.9	181.8	180.6	157.9	177.6	162.6	198.5	172.3	158.4	141.8	173.3
August	200.8	202.2	184.8	185.0	162.0	190.0	165.9	204.5	172.8	158.4	144.7	173.8
September	203.9	205.4	188.9	190.0	170.2	211.0	168.1	208.2	177.9	159.6	150.4	175.1
October	198.0	200.0	185.9	188.8	171.9	179.0	167.8	206.7	177.9	159.6	150.1	175.6
November	193.3	194.6	183.3	185.6	171.9	170.0	164.8	203.0	178.4	160.7	152.2	174.2
December	189.8	191.5	180.3	181.9	168.6	149.0	160.4	198.5	177.9	160.7	154.8	174.2
1929: January	190.6	191.0	180.8	181.3	170.2	153.8	159.3	200.0	184.0	160.7	150.7	173.8
February	188.2	188.8	178.8	179.4	167.8	157.1	158.2	199.6	186.4	160.7	152.7	172.9
March	188.6	189.2	179.3	180.0	167.8	167.6	158.9	201.9	190.1	160.7	152.5	172.9
April	192.9	194.6	183.8	184.4	170.2	176.7	160.4	203.3	196.2	159.6	145.7	172.4
May	198.4	201.3	187.9	190.0	174.4	179.5	160.7	204.8	198.1	159.6	142.3	171.9
June	201.6	205.4	189.9	191.9	176.0	179.0	162.2	205.6	193.9	159.6	140.5	171.9
July	206.7	210.8	192.9	195.6	177.7	188.1	164.1	209.7	187.3	160.7	139.4	171.5
August	206.3	210.8	191.9	194.4	176.0	192.4	165.6	211.2	185.0	160.7	140.5	171.0
September	202.8	206.7	189.4	191.9	175.2	193.8	164.4	209.7	184.0	160.7	143.1	171.9
October	198.0	199.6	186.9	187.5	173.6	185.2	161.9	204.8	180.3	161.8	145.4	171.5

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles [1]
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1928: January	119.6	162.0	164.3	160.6	173.3	117.2	176.5	129.1	142.3	162.8	155.1
February	115.8	124.9	164.3	160.6	173.3	117.2	176.5	129.1	142.1	163.1	151.6
March	112.7	107.2	162.5	160.6	173.3	116.1	200.0	129.1	142.3	163.8	151.4
April	112.7	103.8	162.5	163.6	176.7	114.9	205.9	129.1	141.9	164.1	152.1
May	114.6	108.7	162.5	169.7	176.7	114.9	194.1	130.9	141.9	164.4	153.8
June	115.2	112.5	164.3	172.7	176.7	113.8	170.6	132.7	142.1	165.1	152.6
July	116.5	120.6	164.3	169.7	176.7	114.9	135.3	132.7	142.3	165.1	152.8
August	118.4	130.4	164.3	163.6	176.7	113.8	129.4	129.1	142.3	165.8	154.2
September	122.2	146.1	162.5	160.6	176.7	114.9	129.4	127.3	142.3	166.1	157.8
October	123.4	157.4	162.5	157.6	176.7	113.8	129.4	125.5	142.5	166.4	156.8
November	120.9	171.9	162.5	154.5	176.7	112.6	129.4	123.6	142.3	166.8	157.3
December	118.4	169.3	160.7	154.5	176.7	113.8	129.4	121.8	142.1	166.8	155.8
1929: January	117.1	146.7	160.7	154.5	176.7	112.6	135.3	121.8	142.5	166.1	154.6
February	116.5	142.3	160.7	154.5	176.7	112.6	135.3	120.0	142.6	166.1	154.4
March	116.5	122.0	160.7	154.5	176.7	112.6	135.3	118.2	142.6	166.4	153.0
April	117.1	106.4	160.7	154.5	176.7	112.6	135.3	116.4	142.6	166.4	151.6
May	116.5	112.2	160.7	151.5	176.7	111.5	158.8	116.4	142.6	166.1	153.3
June	115.8	120.0	160.7	148.5	176.7	111.5	182.4	116.4	142.5	165.8	154.8
July	115.8	127.8	160.7	151.5	176.7	111.5	229.4	116.4	142.3	165.8	158.5
August	116.5	140.0	160.7	157.6	176.7	112.6	235.3	120.0	142.5	165.4	160.2
September	117.1	153.6	160.7	160.6	176.7	111.5	229.4	121.8	142.6	165.1	160.8
October	115.8	168.1	158.9	157.6	176.7	111.5	223.5	121.8	142.6	164.8	160.5

[1] 22 articles in 1913–1920; 43 articles in 1921–1929.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929

[Exact comparison of prices in different cities can not be made for some articles, particularly meats and vegetables, owing to differences in trade practices]

Article	Atlanta, Ga.			Baltimore, Md.			Birmingham, Ala.			Boston, Mass.			Bridgeport, Conn.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak..pound..	48.8	50.0	50.7	47.2	50.4	48.0	50.6	51.7	51.0	[1]76.1	[1]76.0	[1]76.5	60.4	60.2	59.5
Round steak....do....	45.4	45.0	45.0	43.4	46.8	44.6	43.4	45.0	44.0	63.3	62.5	60.7	54.3	55.2	53.0
Rib roast.....do....	35.9	37.9	37.5	36.3	37.0	36.2	34.9	37.5	36.9	44.9	44.7	43.4	44.1	43.7	43.5
Chuck roast....do....	30.0	31.2	31.2	30.3	30.5	29.8	29.8	30.5	29.9	33.6	35.5	34.9	37.5	36.5	36.7
Plate beef.....do....	19.8	21.0	20.6	21.7	22.0	21.7	19.6	20.3	20.3	23.7	22.1	22.5	18.5	17.0	17.2
Pork chops.....do....	37.9	38.4	36.4	34.5	39.7	38.2	36.4	36.8	36.1	39.2	42.8	42.3	40.2	43.4	40.5
Bacon, sliced....do....	44.5	41.9	39.5	40.6	40.4	40.2	42.6	43.0	41.8	43.1	42.1	42.2	49.8	48.3	46.9
Ham, sliced.....do....	54.6	56.8	56.8	57.2	57.3	56.8	54.8	55.0	55.0	60.6	58.9	57.7	59.8	59.4	57.5
Lamb, leg of....do....	40.1	40.8	41.9	37.4	39.2	37.7	45.7	40.5	41.7	39.4	39.6	38.2	38.6	39.7	39.1
Hens.....do....	36.1	38.1	38.7	39.8	41.2	40.1	32.3	34.2	35.3	40.8	42.7	41.1	41.9	41.5	41.4
Salmon, canned, red ..pound..	34.3	33.9	33.9	30.6	28.5	28.6	34.2	33.0	33.3	31.4	31.0	31.2	32.3	30.5	30.7
Milk, fresh....quart..	16.5	16.5	16.5	14.0	14.0	14.0	18.7	16.7	16.7	15.8	15.6	15.8	16.0	17.0	17.0
Milk, evaporated .....16-ounce can..	13.5	12.2	12.3	11.1	10.3	10.2	12.1	11.5	11.5	11.7	11.1	11.0	11.6	10.8	10.8
Butter.....pound..	58.9	57.2	57.2	61.1	57.4	58.5	58.7	56.2	57.0	58.8	55.3	56.9	58.8	54.4	55.8
Oleomargarine (all butter substitutes) ..pound..	27.6	28.8	29.2	27.6	26.9	26.6	31.7	30.7	30.7	28.8	29.0	29.0	25.8	25.8	25.8
Cheese.....do....	36.7	35.4	35.9	37.6	36.8	36.5	38.0	36.2	36.2	40.8	39.9	40.0	43.5	43.8	43.5
Lard.....do....	18.6	18.3	18.2	18.5	17.3	17.0	19.3	18.1	18.2	19.3	18.2	18.2	18.5	17.6	17.4
Vegetable lard substitute.....pound..	21.5	22.5	22.5	23.0	23.3	23.3	20.3	21.3	21.5	25.5	25.3	25.3	25.4	25.2	25.4
Eggs, strictly fresh ..dozen..	50.5	52.2	54.2	51.5	52.5	57.1	49.3	48.7	53.0	73.0	72.5	78.2	76.2	70.6	74.8
Bread.....pound..	10.8	10.4	10.2	8.6	8.5	8.4	9.9	9.9	9.9	8.6	8.8	8.8	8.8	8.8	8.8
Flour.....do....	6.6	6.5	6.4	4.8	5.1	5.1	6.7	6.3	6.3	5.4	5.6	5.7	5.3	5.5	5.5
Corn meal.....do....	4.3	4.4	4.5	4.2	4.1	4.1	4.1	4.2	4.1	6.8	6.5	6.5	7.2	7.1	7.0
Rolled oats.....do....	8.8	9.7	9.5	8.0	8.2	8.2	9.8	9.6	9.7	9.0	8.6	8.5	8.5	8.5	8.2
Corn flakes ...8-ounce package..	9.7	9.8	9.8	8.7	8.8	8.8	9.9	9.8	9.8	9.3	9.1	9.3	9.4	9.3	9.3
Wheat cereal ..28-ounce package..	26.3	27.2	27.2	24.3	24.3	24.4	27.4	26.9	27.1	25.0	25.1	25.0	24.3	24.1	24.1
Macaroni.....pound..	21.0	21.4	21.4	19.3	18.8	18.8	18.3	18.1	18.1	21.4	21.1	21.4	22.1	22.0	22.0
Rice.....do....	9.4	9.5	9.7	8.9	9.0	9.1	9.3	9.1	8.9	10.6	10.5	10.5	10.1	10.1	10.1
Beans, navy....do....	13.7	16.5	15.6	12.3	14.0	14.1	13.1	15.1	15.3	12.1	13.7	13.6	12.4	14.5	14.5
Potatoes.....do....	3.4	4.8	4.8	1.9	4.0	4.1	3.5	4.7	4.6	2.1	3.8	3.6	2.0	3.5	3.3
Onions.....do....	7.6	7.7	7.5	7.0	5.7	5.5	7.3	7.3	6.7	7.3	5.7	5.1	6.6	5.3	4.7
Cabbage.....do....	4.8	5.4	5.0	4.7	4.8	4.2	5.1	5.6	4.9	5.3	6.1	5.4	4.8	5.7	4.9
Beans, baked .....No. 2 can..	11.3	11.7	11.6	10.8	10.9	10.9	11.2	11.9	11.5	12.4	12.5	12.6	11.5	11.9	11.9
Corn, canned....do....	17.4	18.0	17.9	16.5	16.5	17.0	16.8	16.6	17.1	17.3	17.6	17.4	19.0	17.8	17.8
Peas, canned....do....	19.2	19.2	19.2	14.9	15.0	15.1	19.5	19.2	19.2	19.7	19.7	19.8	20.6	18.9	18.9
Tomatoes, canned .....No. 2 can..	11.2	12.8	12.3	10.5	10.9	10.6	10.4	12.2	11.8	12.7	13.0	13.5	13.3	14.6	14.3
Sugar.....pound..	7.5	7.3	7.2	5.9	5.9	6.1	7.3	6.9	7.0	6.9	6.4	6.4	6.7	6.5	6.6
Tea.....do....	103.9	105.7	103.4	73.6	72.5	73.2	97.4	95.6	94.4	72.3	74.5	74.5	61.0	57.2	57.2
Coffee.....do....	50.3	50.7	51.1	44.8	45.4	45.0	51.4	51.8	51.9	63.9	53.2	52.4	47.9	47.7	47.2
Prunes.....do....	14.9	16.9	19.1	11.8	13.5	16.0	16.5	18.3	19.8	13.4	15.1	16.3	14.2	16.0	16.0
Raisins.....do....	13.0	14.3	14.4	11.0	11.2	11.0	13.1	12.4	13.2	11.9	10.9	11.1	12.5	12.1	12.3
Bananas.....dozen..	29.4	27.5	28.3	24.5	23.7	24.7	37.5	37.1	35.7	42.5	35.0	39.0	34.2	32.0	31.3
Oranges.....do....	50.8	39.0	37.5	63.1	39.2	43.0	58.3	44.8	44.0	70.4	50.4	53.9	75.5	57.0	55.2

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	Buffalo, N. Y.			Butte, Mont.			Charleston, S. C.			Chicago, Ill.			Cincinnati, Ohio		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak..pound..	50.0	52.9	51.2	35.9	40.5	38.1	37.9	38.5	38.5	57.7	56.0	53.4	47.4	49.1	46.9
Round steak....do....	42.8	45.6	43.9	34.5	37.7	35.0	35.7	38.1	38.1	47.7	47.9	46.4	43.9	45.9	43.7
Rib roast.....do....	36.1	37.6	36.8	31.8	33.5	31.0	30.7	32.2	31.9	42.3	41.3	41.0	37.5	38.6	37.8
Chuck roast....do....	31.4	31.8	31.5	25.3	27.0	26.0	25.0	25.4	25.3	35.6	34.6	34.3	29.5	30.1	29.2
Plate beef.....do....	19.8	20.9	20.3	18.0	17.7	17.5	18.3	20.8	20.4	21.0	20.4	21.0	21.4	22.6	22.5
Pork chops.....do....	38.7	44.5	42.0	35.5	39.5	38.9	35.6	35.4	35.2	37.0	41.5	38.6	35.5	40.9	38.9
Bacon, sliced....do....	41.7	41.7	40.9	51.3	48.8	48.8	38.1	38.6	39.3	49.1	49.5	48.9	40.3	39.0	38.8
Ham, sliced.....do....	53.9	55.7	54.3	55.4	58.3	56.7	48.8	48.1	48.5	57.0	56.9	55.1	55.5	55.9	54.8
Lamb, leg of....do....	34.0	35.5	34.6	37.4	39.8	37.7	43.3	43.0	43.0	38.4	39.2	38.0	39.3	40.2	39.4
Hens.....do....	39.6	39.9	38.5	33.4	35.3	32.9	37.3	38.1	37.4	39.6	40.5	39.6	38.9	40.2	38.4
Salmon, canned, red ....pound..	30.8	29.7	29.7	32.1	30.3	30.9	28.9	29.4	29.7	34.6	32.6	32.8	31.3	29.7	29.7
Milk, fresh.....quart..	14.0	14.0	14.0	14.0	14.0	14.0	18.7	19.0	19.0	14.0	14.0	14.0	14.0	14.0	14.0
Milk, evaporated ....16-ounce can..	11.1	10.3	10.2	10.7	10.6	10.4	11.7	10.2	10.1	11.2	10.4	10.4	11.2	10.6	10.6
Butter.....pound..	57.7	54.3	55.8	56.0	54.0	55.7	56.4	53.1	53.7	55.2	52.7	53.5	58.6	55.5	57.2
Oleomargarine (all butter substitutes).....pound..	27.3	25.9	26.2	.....	.....	.....	29.0	27.7	27.9	27.0	26.6	26.4	28.8	27.7	27.6
Cheese.....do....	39.5	39.8	38.9	37.7	36.5	36.1	35.5	34.6	34.8	44.0	42.6	42.0	40.3	38.6	38.1
Lard.....do....	18.6	17.4	17.3	22.1	21.4	21.0	18.7	18.9	18.9	19.7	18.6	18.2	18.9	17.6	17.8
Vegetable lard substitute.....pound..	25.7	24.8	24.7	30.6	30.7	30.9	21.6	20.8	20.8	26.2	25.8	25.6	25.6	26.1	26.2
Eggs, strictly fresh ....dozen..	57.2	55.8	62.2	54.4	56.3	60.0	53.8	49.8	53.7	52.0	51.6	56.9	49.9	48.2	55.7
Bread.....pound..	8.7	8.3	8.3	9.8	9.8	9.8	11.0	11.0	11.0	9.9	9.7	9.7	8.5	8.7	8.7
Flour.....do....	4.7	4.8	4.9	5.0	5.2	5.0	6.8	6.5	6.5	4.6	4.6	4.6	5.6	5.5	5.5
Corn meal.....do....	5.1	5.0	4.9	6.2	6.4	6.4	4.0	4.1	4.1	7.0	6.3	6.2	4.6	4.6	4.6
Rolled oats.....do....	8.9	8.6	8.7	7.7	8.1	8.1	9.4	9.4	9.3	8.4	8.2	8.1	9.0	9.0	9.0
Corn flakes ...8-ounce package..	9.1	9.2	9.1	10.3	10.3	10.3	10.0	10.0	10.0	9.3	9.2	8.9	9.6	9.6	9.5
Wheat cereal ..28-ounce package..	24.9	24.9	24.8	28.1	28.1	28.1	25.5	25.0	25.2	25.4	24.5	24.3	24.9	24.8	24.9
Macaroni.....pound..	21.2	21.3	21.3	19.7	19.9	19.9	18.5	19.2	19.2	18.9	18.5	18.3	18.5	18.1	18.6
Rice.....do....	9.5	8.9	8.8	11.3	10.6	11.0	6.7	6.8	6.8	10.5	10.4	10.5	9.8	9.8	9.9
Beans, navy....do....	12.4	14.6	14.4	11.4	13.7	13.3	14.5	15.9	15.3	12.7	13.7	13.9	12.7	13.8	13.5
Potatoes.....do....	2.0	3.6	3.2	1.6	3.2	3.7	2.5	4.6	4.2	2.1	3.8	3.7	2.3	3.8	4.0
Onions.....do....	6.4	6.6	6.1	4.8	5.4	4.5	6.9	6.6	6.5	5.9	5.7	5.3	6.0	5.8	5.4
Cabbage.....do....	3.8	4.8	4.1	3.5	4.4	4.6	5.4	5.6	5.0	4.1	5.0	4.9	4.5	5.5	4.8
Beans, baked .....No. 2 can..	10.1	10.3	10.3	13.8	13.7	13.7	10.3	11.0	10.8	12.9	12.7	12.4	11.0	11.5	11.5
Corn, canned...do....	15.8	15.7	15.6	14.8	14.3	14.3	14.2	14.4	14.6	15.7	15.4	15.3	15.3	15.6	15.5
Peas, canned....do....	16.3	15.7	16.0	13.8	14.3	14.3	16.2	16.3	15.9	17.0	16.3	16.3	16.7	16.6	16.7
Tomatoes, canned .....No. 2 can..	12.5	13.9	13.7	12.8	12.4	12.4	10.0	10.2	10.1	13.6	14.0	13.5	12.3	13.9	13.5
Sugar.....pound..	6.5	6.3	6.4	8.3	7.6	7.7	6.6	6.5	6.5	6.8	6.5	6.5	7.3	6.9	7.1
Tea.....do....	68.2	67.7	67.9	83.1	82.6	82.2	82.4	81.2	81.2	69.2	68.6	67.7	81.0	79.3	80.2
Coffee.....do....	47.1	48.0	47.6	55.5	55.1	55.0	46.2	47.4	46.9	47.6	46.7	47.1	46.1	45.7	45.1
Prunes.....do....	13.8	15.0	17.3	14.7	15.3	15.7	11.5	15.7	17.0	15.5	17.9	17.7	14.3	16.2	18.4
Raisins.....do....	12.4	12.0	12.0	14.0	13.4	13.4	10.2	10.4	10.6	13.2	11.5	11.7	13.5	11.9	12.1
Bananas.....dozen..	39.6	39.9	41.1	[1] 12.5	[1] 13.8	[1] 14.3	26.0	24.4	26.3	39.0	38.2	38.3	38.3	38.3	37.5
Oranges.....do....	63.8	44.8	44.5	67.5	49.3	49.3	43.6	35.3	35.7	66.5	49.5	51.2	63.4	46.8	50.2

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	Cleveland, Ohio			Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak...pound..	47.5	49.5	47.5	50.2	51.1	49.9	43.8	48.2	47.7	43.1	44.1	42.1	51.8	54.2	52.1
Round steak....do....	42.4	43.7	41.9	45.2	46.8	45.2	40.7	46.1	45.6	39.9	40.5	37.4	44.1	45.9	43.3
Rib roast.....do....	34.3	35.9	34.5	38.6	40.5	40.0	36.3	38.0	36.6	31.7	31.3	30.1	37.7	39.6	38.1
Chuck roast....do....	30.3	31.8	30.9	33.7	33.3	32.2	30.0	31.6	30.5	27.2	27.1	26.1	31.5	32.0	30.4
Plate beef.....do....	19.7	20.9	20.7	23.1	23.6	23.6	24.1	24.8	24.6	17.5	17.9	17.1	20.0	21.4	20.7
Pork chops.....do....	36.1	41.4	38.4	36.8	37.9	36.9	37.9	38.6	38.2	36.5	38.9	38.4	40.7	43.2	40.6
Bacon, sliced....do....	44.0	41.3	41.6	47.0	45.9	45.2	46.5	41.0	41.4	44.7	42.2	42.2	46.1	45.5	43.5
Ham, sliced.....do....	55.3	56.9	55.3	55.4	53.6	53.6	57.1	59.2	57.1	54.5	56.1	53.3	60.2	60.6	58.8
Lamb, leg of....do....	37.5	38.0	36.9	44.2	46.2	45.8	47.2	45.0	43.6	36.6	36.3	36.1	39.6	39.7	37.5
Hens.....do....	38.9	39.2	38.6	38.2	38.2	39.2	34.1	35.0	34.2	31.6	32.5	31.3	39.7	41.5	40.6
Salmon, canned, red ...pound..	32.3	32.6	32.4	35.7	32.9	32.9	35.5	33.9	34.1	33.6	32.7	33.2	30.1	31.8	31.4
Milk, fresh.....quart..	13.3	13.3	13.3	11.0	12.0	12.0	13.0	13.0	13.0	12.0	12.0	12.0	14.0	14.0	14.0
Milk, evaporated .....16-ounce can..	11.2	10.5	10.3	11.5	10.7	10.6	13.5	12.9	12.7	10.7	9.9	9.9	11.0	10.4	10.3
Butter.....pound..	59.7	55.9	57.1	56.5	53.3	54.6	58.7	55.8	56.0	52.5	48.4	49.3	56.5	54.6	54.8
Oleomargarine (all butter substitutes) ...pound..	29.0	28.5	28.4	27.4	26.8	26.5	28.5	28.8	28.8	25.0	24.4	24.5	26.6	25.1	24.7
Cheese.....do....	40.8	40.0	40.3	38.0	37.2	37.2	37.9	37.8	37.8	40.7	38.5	39.0	39.5	39.7	39.3
Lard.....do....	20.7	19.6	19.4	17.3	15.3	15.7	20.9	21.1	21.3	19.6	18.7	18.4	19.2	18.0	17.9
Vegetable lard substitute.....pound..	26.6	26.4	26.3	27.3	26.7	26.7	22.4	21.7	22.0	21.8	21.2	20.9	26.4	25.8	25.8
Eggs, strictly fresh ...dozen..	55.6	54.4	61.9	45.1	47.1	51.8	48.5	50.2	52.3	49.9	44.3	53.3	53.4	53.6	57.3
Bread.....pound..	7.8	7.8	7.8	7.8	7.7	7.8	9.2	8.8	8.9	7.7	7.6	7.6	8.1	8.1	8.1
Flour.....do....	5.4	5.4	5.3	5.1	5.0	4.9	5.2	5.2	5.2	4.0	3.9	3.9	4.7	5.0	4.9
Corn meal.....do....	5.8	5.9	5.7	4.3	4.2	4.2	4.6	4.6	4.6	4.5	4.6	4.6	6.1	6.3	6.1
Rolled oats.....do....	9.2	8.8	8.7	9.1	8.9	9.3	10.1	10.0	10.0	7.5	7.6	7.6	9.2	9.1	9.2
Corn flakes ...8-ounce package..	10.0	9.8	9.6	9.6	10.2	10.2	10.2	9.8	9.9	9.5	9.7	9.5	9.4	9.7	9.6
Wheat cereal ...28-ounce package..	25.8	25.3	25.3	26.4	26.0	26.6	27.4	27.4	27.2	24.6	24.6	24.6	25.4	26.4	26.3
Macaroni.....pound..	20.8	20.3	20.3	20.1	20.0	20.0	21.1	21.4	21.2	19.4	19.1	19.4	21.1	20.5	20.9
Rice.....do....	10.1	10.5	10.5	11.4	11.1	11.1	11.6	11.0	11.0	8.9	8.9	8.9	10.8	10.6	10.5
Beans, navy....do....	12.6	15.0	14.7	12.8	13.9	13.6	12.9	16.0	15.3	11.4	13.8	13.1	12.5	13.9	13.6
Potatoes.....do....	2.3	4.1	3.9	2.1	3.4	3.7	4.4	5.3	5.2	1.5	2.9	3.0	1.6	3.6	3.3
Onions.....do....	6.5	5.6	4.6	6.5	6.2	5.5	7.3	7.8	7.3	4.7	4.8	4.4	5.6	5.1	4.0
Cabbage.....do....	4.8	5.2	4.6	4.4	4.4	4.5	5.2	6.3	5.9	2.1	4.0	3.5	3.8	5.0	3.7
Beans, baked .....No. 2 can..	12.3	11.8	11.8	12.3	10.9	10.9	12.5	13.3	13.2	11.4	11.6	11.6	11.6	11.4	11.1
Corn, canned...do....	16.8	16.5	16.5	14.3	13.6	14.1	18.6	17.6	17.8	13.9	14.2	14.1	15.7	15.5	14.7
Peas, canned....do....	17.5	17.1	17.1	14.8	15.3	15.3	22.3	21.8	22.0	15.0	15.2	15.3	15.7	15.4	15.3
Tomatoes, canned .....No. 2 can..	13.8	14.5	14.5	13.0	13.5	13.2	11.8	13.8	13.5	11.8	12.7	12.9	12.4	13.1	12.4
Sugar.....pound..	7.5	7.2	7.2	7.5	7.1	7.2	7.6	7.1	7.2	7.3	7.5	7.4	7.1	6.9	7.0
Tea.....do....	81.8	82.5	82.5	86.5	85.6	85.6	102.9	105.1	103.8	70.0	69.4	70.2	74.8	72.1	72.1
Coffee.....do....	52.5	51.4	51.2	49.5	49.3	49.0	59.1	58.3	58.5	50.0	49.5	50.1	49.6	48.3	48.5
Prunes.....do....	13.8	16.2	17.4	15.2	16.6	16.5	17.0	19.0	20.1	14.4	17.2	19.6	14.4	16.9	17.4
Raisins.....do....	12.9	12.1	12.3	12.5	11.6	12.5	14.4	13.1	13.6	11.0	11.8	12.1	11.6	12.4	12.3
Bananas.....dozen..	[1] 9.5	[1] 9.7	[1] 9.7	39.0	37.5	36.3	35.0	35.0	33.3	[1] 10.8	10.6	[1] 11.1	35.0	35.0	35.0
Oranges.....do....	68.5	54.3	56.4	68.6	45.6	48.6	62.2	45.5	45.9	62.0	38.5	37.2	69.7	45.0	46.3

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	Fall River, Mass.			Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.			Kansas City, Mo.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak...pound..	[3]74.3	[3]74.8	[3]72.6	39.1	41.4	42.7	47.1	51.1	49.5	40.0	42.5	41.8	47.9	50.3	48.8
Round steak....do....	59.1	58.1	57.5	38.2	40.9	41.5	45.7	49.7	47.6	35.0	35.8	36.8	43.3	45.9	44.3
Rib roast.....do....	41.5	39.7	39.7	29.8	31.4	33.1	35.3	35.9	34.7	31.1	32.3	32.5	33.4	36.0	35.7
Chuck roast....do....	32.7	33.5	32.0	24.7	25.6	26.3	30.6	32.9	31.7	24.5	26.3	26.0	27.3	29.6	28.4
Plate beef.....do....	20.0	19.8	17.8	21.2	22.2	22.7	21.7	21.3	21.5	16.0	17.1	17.4	19.9	21.0	20.5
Pork chops.....do....	39.8	41.7	39.9	34.4	35.0	36.4	36.0	40.1	38.0	32.5	33.8	33.5	34.9	39.5	38.0
Bacon, sliced....do....	42.7	39.3	38.6	42.1	41.2	40.0	44.6	41.6	40.9	39.4	38.0	37.2	44.6	43.9	43.0
Ham, sliced.....do....	53.2	56.8	55.1	49.5	51.4	51.5	54.9	57.7	56.2	49.6	50.0	49.1	53.9	54.0	51.6
Lamb, leg of....do....	40.6	43.7	43.6	31.6	33.3	37.1	40.9	43.3	41.7	40.0	40.0	37.5	35.6	36.7	35.1
Hens.....do....	45.2	46.9	46.3	36.9	38.1	39.0	39.5	43.6	41.6	35.0	36.4	36.2	33.6	34.4	34.3
Salmon, canned, red ...pound..	34.7	32.5	33.0	31.1	29.4	30.2	32.3	33.1	34.9	32.7	30.1	30.0	35.6	35.0	35.3
Milk, fresh.....quart..	14.7	15.0	15.0	15.0	15.0	15.0	12.0	12.0	12.0	20.3	20.3	20.3	13.0	13.0	13.0
Milk, evaporated ...16-ounce can..	12.8	12.0	11.8	11.3	10.3	10.1	10.5	10.1	10.0	11.5	10.6	10.2	11.3	10.4	10.3
Butter.....pound..	57.5	55.6	56.4	55.9	54.4	54.2	56.8	54.8	55.6	57.2	54.8	57.2	55.1	53.2	53.3
Oleomargarine (all butter substitutes) ...pound..	27.1	27.1	27.0	24.8	25.2	25.5	28.6	28.5	28.4	29.7	28.4	28.1	25.7	25.5	25.0
Cheese.....do....	42.5	41.1	41.6	34.0	32.0	33.2	42.8	40.8	40.8	35.5	34.5	33.9	37.5	38.6	37.8
Lard.....do....	19.2	17.6	17.4	19.7	21.1	20.9	17.7	17.0	16.6	19.1	19.2	18.2	19.1	18.5	18.1
Vegetable lard substitute.....pound..	26.4	26.7	26.9	16.6	16.6	16.5	26.8	26.9	26.8	22.1	22.3	21.8	25.7	26.1	25.9
Eggs, strictly fresh ...dozen..	76.6	71.8	75.8	45.2	45.3	47.1	47.5	46.7	54.4	64.1	51.1	58.5	43.8	44.7	47.0
Bread.....pound..	8.8	8.3	8.3	8.0	8.3	8.2	7.9	8.0	8.0	10.1	10.0	10.0	9.6	9.2	9.2
Flour.....do....	5.7	5.6	5.6	5.0	5.0	4.9	5.2	5.2	5.2	6.1	6.1	6.0	4.8	5.0	4.9
Corn meal.....do....	7.2	6.5	6.7	4.3	4.5	4.3	4.1	4.3	4.6	4.3	4.2	4.2	5.4	5.4	5.3
Rolled oats.....do....	9.7	9.4	9.4	8.5	8.4	8.5	8.5	8.9	8.8	9.3	9.2	9.2	9.1	9.2	9.2
Corn flakes ...8-ounce package..	9.8	9.7	9.7	8.7	8.9	8.9	8.9	9.5	9.3	9.5	9.3	9.5	9.7	9.7	9.7
Wheat cereal ...28-ounce package..	25.3	24.8	24.8	25.2	25.3	25.3	25.6	25.3	25.3	25.2	25.2	25.1	27.1	27.2	27.2
Macaroni.....pound..	23.3	23.5	23.3	18.1	18.2	18.0	18.7	18.7	18.7	19.7	19.3	18.4	20.1	20.0	20.0
Rice.....do....	10.8	10.8	10.8	7.1	7.5	7.3	10.7	10.4	10.4	7.2	7.4	7.3	9.2	9.8	9.8
Beans, navy....do....	12.8	13.8	13.8	12.4	16.0	14.7	12.9	14.5	13.8	12.8	15.1	14.7	12.8	15.0	14.6
Potatoes.....do....	1.9	3.8	3.7	3.9	5.2	5.0	2.0	4.1	3.9	3.2	4.8	4.4	1.5	3.8	3.8
Onions.....do....	7.5	5.2	4.9	5.6	5.7	5.2	6.5	6.6	5.5	7.7	7.9	6.8	7.2	7.1	7.0
Cabbage.....do....	5.7	5.9	5.0	4.8	6.8	5.9	4.1	5.1	4.8	4.7	5.4	4.5	3.7	5.7	4.4
Beans, baked ...No. 2 can..	12.8	12.6	12.5	10.9	10.7	10.7	10.4	11.1	11.1	10.5	10.6	10.5	11.8	12.8	12.6
Corn, canned....do....	17.2	16.4	16.4	14.5	14.5	14.5	13.8	14.0	14.1	17.2	17.0	17.0	14.5	15.5	15.5
Peas, canned....do....	19.6	18.1	18.4	14.8	15.5	15.5	14.5	15.0	15.0	16.5	18.0	18.8	15.2	16.5	16.6
Tomatoes, canned ...No. 2 can..	12.6	13.4	12.7	9.9	11.5	10.6	12.4	14.2	14.2	10.5	10.5	9.7	11.0	13.5	12.8
Sugar.....pound..	6.8	6.4	6.4	6.8	6.6	6.6	7.3	7.2	7.2	7.1	6.9	6.6	7.2	7.1	7.1
Tea.....do....	58.3	59.5	59.1	85.7	85.7	84.7	84.8	89.8	89.8	96.7	97.6	95.7	93.4	90.9	90.3
Coffee.....do....	50.9	49.8	50.1	44.3	44.2	44.2	47.8	48.1	48.1	49.3	47.1	48.6	52.2	52.0	51.5
Prunes.....do....	13.5	15.2	14.7	13.0	15.9	16.7	15.0	18.7	20.8	16.1	14.5	16.5	14.4	17.7	19.8
Raisins.....do....	13.2	12.1	12.1	12.0	10.6	10.7	13.6	13.9	14.0	14.0	12.0	12.4	12.7	13.5	13.5
Bananas.....dozen..	[2]9.0	[2]8.6	[2]8.7	26.8	25.4	25.4	29.0	30.0	30.6	28.6	26.4	27.5	[2]10.7	[2]10.5	[2]10.6
Oranges.....do....	61.5	44.8	46.6	51.3	34.1	34.1	62.5	45.8	45.2	35.8	50.0	45.0	64.1	35.6	38.6

[2] Per pound.

[3] The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	Little Rock, Ark.			Los Angeles, Calif.			Louisville, Ky.			Manchester, N. H.			Memphis, Tenn.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak [1]—pound	44.1	48.3	47.2	45.4	47.2	46.8	45.0	45.9	45.0	[3]65.9	[3]65.6	[3]64.9	49.4	49.1	48.9
Round steak—do	39.9	44.5	44.0	38.6	39.1	38.7	39.2	41.4	40.5	54.5	54.4	53.0	46.3	45.3	45.1
Rib roast—do	35.2	38.3	37.8	36.1	35.3	35.4	32.1	33.6	34.2	35.5	34.8	35.4	34.9	35.1	34.4
Chuck roast—do	28.5	30.3	30.9	27.9	27.3	27.3	26.9	27.5	27.3	31.1	30.4	30.6	28.9	29.5	28.8
Plate beef—do	20.8	23.9	24.8	20.7	18.2	18.1	21.2	22.5	22.2	24.0	22.5	22.3	22.4	22.0	22.5
Pork chops—do	34.8	36.3	34.8	44.4	47.2	43.6	34.6	36.9	35.4	36.6	40.2	39.4	34.4	36.1	34.5
Bacon, sliced—do	44.7	45.2	45.2	53.8	52.3	51.4	45.4	43.7	43.5	38.8	37.2	37.3	37.6	36.1	36.0
Ham, sliced—do	53.9	54.0	51.5	71.3	70.3	68.4	51.2	51.4	49.5	48.1	48.9	47.2	53.2	54.6	53.9
Lamb, leg of—do	41.8	40.8	40.8	38.1	38.3	37.6	37.4	36.0	38.3	37.8	39.9	38.8	37.0	39.4	39.6
Hens—do	31.4	31.1	31.4	46.4	45.7	45.6	36.4	37.7	37.1	42.8	43.9	43.6	32.8	34.2	34.5
Salmon, canned, red—pound	34.0	30.9	31.6	29.9	30.1	30.7	32.1	30.6	30.7	31.4	29.9	30.3	33.4	34.4	34.4
Milk, fresh—quart	14.0	15.0	15.0	15.0	15.0	15.0	12.8	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
Milk, evaporated—16-ounce can	11.8	11.4	11.2	9.9	10.0	9.8	11.9	11.1	10.7	12.6	12.0	12.1	11.6	10.7	10.5
Butter—pound	55.7	54.2	54.9	59.9	57.8	57.6	59.0	54.5	56.2	59.0	55.3	56.1	56.3	53.4	54.5
Oleomargarine (all butter substitutes)—pound	26.8	25.3	25.1	25.3	24.7	24.1	27.9	25.6	25.9	28.3	27.0	27.0	24.4	25.9	26.3
Cheese—do	37.4	36.8	35.3	38.3	38.5	38.7	39.4	38.0	37.2	39.1	38.1	38.4	36.2	34.8	25.2
Lard—do	20.4	19.5	19.5	21.4	19.3	19.2	18.7	18.0	17.8	18.5	18.1	17.9	17.3	16.1	15.5
Vegetable lard substitute—pound	21.1	20.9	21.0	24.5	24.4	24.3	27.4	26.2	26.2	25.8	26.1	26.1	21.0	22.1	22.1
Eggs, strictly fresh—dozen	46.7	49.0	50.8	57.4	56.4	58.8	46.6	46.9	51.3	65.2	68.7	70.8	43.8	44.3	46.4
Bread—pound	9.3	9.6	9.5	8.6	8.6	8.5	9.2	9.4	9.3	8.7	8.1	8.1	9.5	9.2	9.2
Flour—do	6.0	5.9	5.9	5.0	4.9	4.9	6.1	6.2	6.0	5.1	5.4	5.3	6.0	6.0	5.9
Corn meal—do	4.1	4.0	4.2	5.8	5.7	5.7	4.2	4.1	4.0	5.3	5.5	5.4	3.9	4.0	4.0
Rolled oats—do	10.6	10.3	10.6	9.9	10.0	10.0	8.6	8.7	8.4	8.7	8.3	8.4	9.0	8.8	8.9
Corn flakes—8-ounce package	9.8	9.8	9.8	9.4	9.5	9.4	9.5	9.5	9.5	9.1	9.2	9.1	9.8	9.8	9.7
Wheat cereal—28-ounce package	27.0	27.3	27.3	25.0	25.0	25.1	27.1	27.2	27.3	25.7	25.4	25.6	25.8	25.8	25.8
Macaroni—pound	20.2	20.2	20.3	18.1	17.9	17.9	18.9	18.4	18.4	23.2	23.3	23.2	19.5	19.8	19.4
Rice—do	7.9	8.3	8.8	9.9	9.5	9.6	11.2	10.0	10.6	8.9	9.0	8.8	8.2	8.5	8.7
Beans, navy—do	12.7	15.3	15.0	11.9	14.9	13.3	12.8	14.5	14.2	12.4	13.8	13.9	12.1	14.2	13.8
Potatoes—do	2.6	4.4	4.3	2.6	3.9	4.1	2.2	4.2	3.9	1.7	3.5	3.2	2.9	4.7	4.0
Onions—do	6.7	6.9	6.4	4.9	4.5	4.4	5.7	5.4	5.6	6.7	5.4	5.1	5.7	5.5	5.3
Cabbage—do	4.6	6.0	5.3	6.1	4.9	4.8	4.4	5.3	4.3	4.2	4.5	4.0	3.8	4.8	4.1
Beans, baked—No. 2 can	11.2	11.8	12.3	11.6	11.7	11.8	10.9	11.3	11.3	13.4	13.7	13.7	11.4	11.5	11.8
Corn, canned—do	15.9	16.8	16.8	15.6	15.6	15.5	15.3	14.8	15.0	16.0	16.4	16.4	14.5	14.5	14.7
Peas, canned—do	17.2	18.2	18.2	17.1	16.5	16.7	15.5	15.1	15.1	17.6	17.6	17.6	15.1	15.7	15.7
Tomatoes, canned—No. 2 can	10.1	13.5	13.5	[4]15.0	[4]16.0	[4]14.9	10.9	12.6	11.4	12.1	14.1	12.9	9.9	11.3	11.1
Sugar—pound	7.5	7.4	7.4	6.6	6.3	6.4	7.2	7.2	7.3	6.9	6.9	6.9	7.0	6.9	6.8
Tea—do	104.9	106.7	107.5	74.9	73.4	73.6	91.9	90.3	92.0	64.9	63.6	63.4	96.9	95.6	95.6
Coffee—do	54.6	53.8	54.1	53.9	53.5	53.2	50.5	49.4	49.8	51.0	50.6	50.4	49.6	48.5	48.3
Prunes—do	14.9	16.1	19.2	12.8	16.2	18.8	15.5	16.3	17.1	13.0	15.5	15.5	13.4	14.5	15.1
Raisins—do	14.0	14.2	14.2	10.2	10.7	11.2	13.0	12.7	12.5	12.1	11.8	11.3	13.7	12.5	12.5
Bananas—dozen	[2]8.9	[2]8.2	[2]9.3	[2]9.5	[2]8.6	[2]8.9	[2]10.2	[2]9.9	[2]9.9	[2]8.9	[2]7.5	[2]7.4	[2]9.1	[2]8.0	[2]8.3
Oranges—do	58.4	50.0	43.8	55.4	47.9	47.4	54.0	41.8	40.8	70.9	48.0	47.6	56.0	33.8	37.3

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.
[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	Milwaukee, Wis.			Minneapolis, Minn.			Mobile, Ala.			Newark, N. J.			New Haven, Conn.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak...pound	47.5	49.1	47.0	43.0	44.1	43.0	43.3	44.8	44.1	55.6	55.3	53.7	65.9	66.5	65.0
Round steak...do	42.4	44.8	43.4	38.3	39.9	39.0	41.7	42.9	42.3	52.3	52.2	50.3	54.5	55.2	55.2
Rib roast...do	34.5	34.5	33.6	32.4	35.0	34.2	33.3	35.4	34.8	42.0	41.7	40.6	42.9	44.1	43.1
Chuck roast...do	32.5	32.5	31.9	28.5	30.5	29.6	27.8	29.4	28.8	34.2	34.7	32.3	35.6	37.1	34.7
Plate beef...do	21.2	21.2	19.9	18.5	19.3	19.1	22.6	22.3	21.3	19.9	19.8	19.2	20.0	20.9	19.9
Pork chops...do	34.8	40.5	37.5	37.8	40.1	37.1	36.1	36.9	36.3	40.2	41.6	39.9	38.0	43.6	41.1
Bacon, sliced...do	46.2	45.4	44.3	48.8	47.3	46.2	42.3	39.8	39.5	44.0	44.4	43.3	46.9	46.2	46.0
Ham, sliced...do	51.2	50.7	50.0	53.8	53.7	52.8	51.8	50.0	48.9	57.7	57.5	55.6	62.0	62.1	61.0
Lamb, leg of...do	39.6	39.8	38.8	34.0	36.1	34.2	41.7	44.0	44.0	38.9	40.1	39.0	39.5	42.5	40.4
Hens...do	34.9	36.2	32.9	34.0	36.8	34.5	33.0	34.0	35.0	39.3	41.0	40.0	43.1	44.0	43.7
Salmon, canned, red ...pound	32.7	35.1	35.2	35.5	35.3	34.6	33.1	30.6	30.8	30.9	29.6	28.7	34.1	32.7	32.0
Milk, fresh...quart	11.0	11.0	12.0	12.0	12.0	12.0	18.0	18.0	18.0	16.0	16.0	16.0	16.0	17.0	17.0
Milk, evaporated ...16-ounce can	11.2	10.6	10.5	11.7	11.2	11.1	11.3	10.1	10.1	10.8	10.4	10.4	11.9	11.3	11.5
Butter...pound	54.5	52.1	53.3	53.7	51.6	52.8	57.0	55.6	55.0	59.3	55.8	57.3	58.0	54.3	56.4
Oleomargarine (all butter substitutes)...pound	26.7	26.4	26.6	25.8	25.6	25.3	30.1	27.6	27.1	29.6	30.8	30.9	29.1	29.2	28.3
Cheese...do	38.1	36.3	36.7	37.4	37.9	38.3	36.6	35.0	34.7	41.1	41.5	41.5	41.5	41.6	41.6
Lard...do	19.6	18.5	18.4	19.8	19.3	19.1	18.8	18.3	18.4	19.6	18.7	19.1	19.9	19.1	19.0
Vegetable lard substitute...pound	26.4	26.6	26.6	26.8	26.5	26.6	20.1	19.3	19.9	25.3	25.0	24.9	26.0	25.4	25.4
Eggs, strictly fresh ...dozen	46.8	45.1	50.5	41.4	44.2	47.4	50.6	45.8	48.6	65.9	61.9	71.2	75.4	71.3	76.2
Bread...pound	8.7	8.7	8.5	8.9	8.9	8.9	10.1	10.1	9.9	9.1	8.9	9.0	9.0	8.8	8.6
Flour...do	4.5	4.8	4.7	4.8	5.1	5.0	6.1	5.8	5.8	5.0	5.2	5.2	5.3	5.3	5.4
Corn meal...do	5.9	6.3	6.2	5.7	5.8	5.8	4.1	4.0	4.0	6.9	6.5	6.5	6.9	6.8	6.9
Rolled oats...do	8.2	8.1	8.1	7.9	7.9	7.9	8.4	8.4	8.1	8.3	8.7	8.6	9.3	9.4	9.2
Corn flakes ...8-ounce package	9.3	9.5	9.4	9.6	9.7	9.7	9.3	9.0	8.9	8.8	8.9	8.9	10.1	10.0	10.0
Wheat cereal ...28-ounce package	24.6	24.9	24.9	25.4	25.2	24.9	25.0	25.0	25.0	24.6	26.6	26.6	24.6	24.5	24.3
Macaroni...pound	17.8	17.7	17.7	17.9	17.7	18.1	21.3	20.9	20.9	21.4	20.8	21.3	22.4	22.0	22.1
Rice...do	10.2	9.9	9.9	9.8	10.2	10.2	8.6	8.2	7.9	9.9	9.6	9.3	10.4	10.3	10.5
Beans, navy...do	13.0	14.3	14.1	13.3	14.8	14.4	11.8	14.3	14.5	13.0	14.7	15.2	11.8	14.2	14.1
Potatoes...do	1.7	3.5	3.4	1.1	3.0	3.0	3.0	4.5	4.2	2.2	4.2	4.1	2.2	3.9	3.8
Onions...do	5.0	5.9	5.0	5.3	5.8	5.0	6.0	5.4	4.8	7.3	5.6	5.0	6.9	6.6	5.7
Cabbage...do	3.0	4.2	4.0	2.4	4.5	4.0	4.4	5.1	4.9	5.4	6.0	4.8	5.2	7.0	5.8
Beans, baked ...No. 2 can	11.5	11.3	11.2	12.4	12.4	12.5	10.6	10.7	11.0	10.9	10.9	10.8	12.1	12.3	12.3
Corn, canned...do	16.2	16.0	16.0	15.3	14.8	14.8	14.7	14.5	14.2	17.1	16.1	16.1	18.2	18.2	18.5
Peas, canned...do	15.7	15.8	15.5	15.0	15.4	15.0	15.9	15.6	15.6	16.9	16.7	16.7	21.5	20.9	21.0
Tomatoes, canned ...No. 2 can	13.2	14.7	14.1	13.3	14.3	14.0	10.3	11.8	11.1	10.8	11.4	11.1	13.4	14.3	14.3
Sugar...pound	6.7	6.4	6.6	7.0	6.7	7.0	6.8	6.6	6.7	6.5	6.4	6.4	6.8	6.8	6.8
Tea...do	68.8	70.5	70.0	69.2	68.8	68.8	78.6	79.7	78.6	59.0	57.9	57.9	60.3	59.1	59.1
Coffee...do	46.0	46.4	46.2	53.8	52.5	53.5	47.9	48.9	47.9	49.2	49.0	48.6	51.9	50.5	50.5
Prunes...do	14.2	16.3	16.9	14.6	17.3	17.9	12.9	13.3	13.5	13.0	15.1	16.5	13.4	15.3	16.3
Raisins...do	13.2	12.8	12.7	12.7	12.5	12.9	11.2	10.8	11.1	12.1	11.6	11.7	13.3	12.4	12.7
Bananas...dozen	[1] 9.4	[1] 9.2	[1] 9.6	[1]10.3	[1]10.3	[1]10.4	25.0	22.0	21.0	37.0	36.3	36.3	33.8	33.3	33.7
Oranges...do	65.5	43.7	44.9	64.3	40.4	40.5	56.5	34.9	35.9	73.3	54.7	61.5	71.6	49.9	52.5

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	New Orleans, La.			New York, N. Y.			Norfolk, Va.			Omaha, Nebr.			Peoria, Ill.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak..pound..	44.6	45.2	44.5	55.4	55.2	54.0	48.5	50.3	48.8	49.2	47.6	47.9	40.3	42.8	41.4
Round steak....do....	39.1	40.5	40.2	51.8	52.9	50.6	42.3	44.8	42.9	45.3	46.2	44.7	39.4	42.3	41.2
Rib roast.....do....	35.9	38.3	37.6	46.1	44.4	43.6	38.3	40.0	38.1	33.9	33.9	34.0	31.8	33.5	31.3
Chuck roast.....do....	26.3	27.1	27.0	31.4	32.0	31.4	28.3	29.8	28.9	30.4	30.4	30.0	28.4	29.3	28.2
Plate beef.....do....	21.5	22.6	23.2	26.0	26.5	25.8	20.9	21.9	21.1	18.4	19.4	19.8	19.3	19.9	19.2
Pork chops.....do....	37.7	39.4	37.8	41.0	43.4	41.0	35.2	38.5	37.4	37.1	37.6	36.6	34.5	36.1	33.8
Bacon, sliced....do....	44.1	44.7	43.5	47.7	46.3	45.1	42.1	42.8	40.8	48.3	44.4	45.3	45.0	44.1	43.6
Ham, sliced.....do....	51.4	55.7	53.6	59.9	59.0	58.4	47.5	46.5	46.0	55.2	55.6	53.4	51.3	51.4	50.9
Lamb, leg of....do....	38.4	39.3	38.7	38.5	38.0	36.9	41.2	42.8	39.2	37.8	37.4	37.0	40.0	44.3	42.1
Hens.....do....	37.7	39.9	39.4	39.7	41.4	40.0	37.5	37.5	38.6	32.1	33.7	33.2	34.3	34.9	34.4
Salmon, canned, red ..pound..	35.5	35.1	35.0	31.0	31.2	31.2	34.9	32.8	33.0	34.8	34.0	33.9	33.8	32.7	32.7
Milk, fresh.....quart..	14.0	14.0	14.0	16.0	16.0	16.0	18.0	18.0	18.0	11.3	11.3	11.3	13.0	13.0	13.0
Milk, evaporated ..16-ounce can..	10.9	10.0	10.1	10.9	10.3	10.2	11.4	10.4	10.3	11.4	10.3	10.3	11.3	10.2	10.1
Butter.....pound..	57.6	56.5	57.5	57.6	56.2	57.1	59.7	58.0	57.9	53.5	49.8	50.3	53.9	50.0	50.5
Oleomargarine (all butter substitutes) ..pound..	28.5	28.3	28.1	28.5	28.2	27.9	26.1	26.9	26.6	26.2	26.0	26.0	28.0	27.5	27.5
Cheese.....do....	38.8	36.9	36.8	41.3	41.2	41.0	35.2	35.3	35.3	37.1	35.8	35.4	36.4	36.4	35.6
Lard.....do....	18.6	18.7	17.9	20.6	19.6	19.3	19.0	18.2	18.0	20.4	19.4	19.3	19.2	18.4	18.0
Vegetable lard substitute.....pound..	19.4	20.5	20.4	25.6	25.6	25.6	21.7	21.8	21.1	25.9	25.5	26.3	27.4	27.5	27.0
Eggs, strictly fresh ..dozen..	46.5	45.6	50.9	68.8	63.3	72.0	57.6	53.7	57.4	40.0	41.8	44.8	44.5	43.8	48.8
Bread.....pound..	8.9	8.9	8.9	8.6	8.7	8.7	9.9	9.3	9.3	9.6	9.2	9.2	10.0	10.0	10.0
Flour.....do....	6.8	6.6	6.6	4.9	5.2	5.1	5.5	5.4	5.5	4.4	4.4	4.3	4.7	4.9	4.9
Corn meal.....do....	4.3	4.1	4.3	6.6	6.7	6.6	4.7	4.7	4.7	4.5	4.8	4.7	4.9	4.9	4.9
Rolled oats.....do....	8.6	8.6	8.6	8.6	8.7	8.7	8.8	8.7	8.6	10.0	9.9	9.7	8.9	8.6	8.6
Corn flakes ...8-ounce package..	9.5	9.5	9.6	8.9	9.0	9.0	9.7	9.6	9.7	10.1	9.9	9.8	9.6	9.5	9.5
Wheat cereal ..28-ounce package..	24.9	24.8	24.9	24.5	24.0	24.3	25.3	24.9	24.9	28.2	27.9	27.9	25.8	25.7	25.7
Macaroni.....pound..	10.8	11.2	11.2	20.9	20.4	20.7	19.0	19.2	19.1	21.2	21.4	21.0	18.8	18.7	18.7
Rice.....do....	8.5	8.8	8.6	9.8	9.7	9.6	11.0	10.3	10.0	11.2	10.4	10.2	10.2	9.3	9.2
Beans, navy.....do....	11.1	13.8	13.5	13.2	14.8	15.1	11.7	14.2	13.8	13.0	13.9	13.8	12.9	14.3	13.6
Potatoes.....do....	3.0	4.5	4.2	2.4	4.3	4.4	2.0	4.6	4.5	1.5	3.1	2.9	1.6	3.5	3.5
Onions.....do....	5.0	4.7	4.4	6.6	6.2	6.7	6.8	6.2	5.4	5.3	5.5	5.0	6.3	6.4	5.9
Cabbage.....do....	4.6	5.6	4.3	4.7	5.9	5.0	4.7	5.1	5.0	3.0	4.9	4.6	3.4	4.4	4.1
Beans, baked ..No. 2 can..	10.6	11.0	11.0	11.3	11.7	11.6	10.5	10.4	10.4	13.1	13.3	13.4	10.2	10.2	10.2
Corn, canned...do....	15.4	15.8	15.6	14.9	15.0	14.8	14.7	14.9	14.8	16.0	16.3	15.8	14.5	13.9	14.1
Peas, canned....do....	16.9	16.0	15.9	15.5	15.2	15.2	18.2	17.5	17.2	15.9	15.1	15.2	16.9	17.1	17.0
Tomatoes, canned ..No. 2 can..	10.5	12.7	11.7	11.7	11.6	11.2	9.9	10.6	9.7	13.4	14.5	14.6	12.3	13.7	13.4
Sugar.....pound..	6.3	6.0	6.1	6.2	6.1	6.1	6.9	6.5	6.5	7.2	6.7	7.0	7.5	7.0	7.4
Tea.....do....	81.9	82.6	83.3	68.0	68.2	68.4	95.6	93.3	93.3	77.2	80.0	81.4	65.6	63.7	63.7
Coffee.....do....	35.1	35.7	35.6	45.7	45.0	44.6	50.5	48.6	49.4	53.7	53.6	53.6	49.1	48.1	48.4
Prunes.....do....	14.0	15.6	17.6	13.6	15.8	16.5	13.4	14.3	14.3	14.6	17.0	17.6	15.2	16.7	18.8
Raisins.....do....	10.6	10.1	10.7	12.1	12.1	12.2	12.3	11.7	12.3	13.7	13.2	13.3	13.1	12.7	13.0
Bananas.....dozen..	17.9	16.3	15.0	40.2	35.8	37.0	33.6	31.1	31.7	[1] 10.2	[1] 10.6	[1] 11.1	[1] 10.1	[1] 9.7	[1] 10.0
Oranges.....do....	56.3	46.3	45.8	76.7	57.4	39.8	67.1	53.1	48.5	57.6	37.4	35.2	58.2	39.0	40.1

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	Philadelphia, Pa.			Pittsburgh, Pa.			Portland, Me.			Portland, Oreg.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	[1] 64. 4	[1] 65. 5	[1] 63. 8	57. 2	58. 2	56. 2	[1] 71. 4	[1] 75. 8	[1] 71. 2	35. 8	38. 3	37. 4
Round steak, do	51. 3	51. 7	49. 8	48. 5	49. 8	42. 9	54. 4	58. 6	57. 2	33. 8	36. 6	36. 3
Rib roast, do	42. 8	43. 3	43. 5	41. 5	41. 5	40. 9	37. 9	39. 9	37. 7	30. 3	31. 0	30. 8
Chuck roast, do	36. 8	36. 3	35. 1	35. 6	33. 6	32. 6	27. 4	30. 0	28. 5	24. 6	25. 9	25. 4
Plate beef, do	20. 5	19. 4	19. 9	22. 2	20. 3	20. 1	25. 7	27. 0	26. 9	18. 6	20. 2	20. 1
Pork chops, do	40. 1	45. 0	42. 3	40. 3	43. 5	41. 6	41. 3	43. 5	41. 6	36. 0	39. 1	38. 6
Bacon, sliced, do	43. 7	43. 2	42. 3	50. 2	48. 5	46. 9	42. 2	39. 5	39. 1	51. 3	51. 9	51. 6
Ham, sliced, do	59. 6	60. 3	57. 1	61. 1	61. 2	60. 5	55. 4	56. 5	55. 3	55. 9	56. 9	55. 9
Lamb, leg of, do	41. 4	42. 3	40. 3	41. 0	43. 6	41. 1	37. 5	40. 8	38. 2	36. 4	35. 3	34. 6
Hens, do	42. 6	42. 4	41. 5	45. 7	48. 3	47. 1	42. 4	43. 8	43. 5	33. 8	37. 0	36. 2
Salmon, canned, red, do	30. 0	28. 5	28. 8	30. 6	30. 1	29. 8	31. 8	30. 1	30. 4	32. 4	33. 0	33. 0
Milk, fresh, quart	13. 0	14. 0	14. 0	15. 0	14. 0	14. 0	15. 0	15. 0	15. 0	12. 0	12. 0	12. 0
Milk, evaporated, 16-ounce can	11. 5	10. 8	10. 7	11. 0	10. 3	10. 5	12. 3	11. 4	11. 5	10. 0	10. 1	10. 1
Butter, pound	60. 7	57. 4	57. 8	59. 1	56. 9	57. 7	59. 5	56. 3	57. 3	59. 1	56. 8	57. 9
Oleomargarine (all butter substitutes), pound	29. 0	28. 5	28. 1	28. 8	27. 7	27. 7	26. 6	26. 4	26. 9	26. 3	26. 2	26. 3
Cheese, do	42. 8	42. 7	42. 8	41. 8	41. 5	40. 4	39. 4	38. 8	38. 6	38. 0	38. 3	38. 3
Lard, do	19. 4	18. 2	17. 5	19. 2	18. 2	17. 9	19. 4	17. 9	17. 8	19. 0	19. 5	19. 0
Vegetable lard substitute, do	25. 1	24. 9	25. 1	27. 8	26. 9	26. 8	26. 2	25. 7	25. 7	28. 4	28. 6	28. 4
Eggs, strictly fresh, dozen	60. 5	56. 7	63. 8	54. 7	56. 1	60. 7	68. 4	68. 8	69. 2	53. 5	47. 5	53. 9
Bread, pound	8. 6	8. 3	8. 3	9. 1	8. 9	8. 8	10. 1	9. 0	9. 3	9. 3	9. 3	9. 3
Flour, do	4. 8	4. 9	5. 0	4. 8	5. 1	5. 1	5. 1	5. 4	5. 3	4. 7	4. 9	4. 9
Corn meal, do	5. 3	5. 3	5. 7	6. 0	6. 2	6. 2	5. 1	5. 3	5. 3	5. 8	6. 1	6. 1
Rolled oats, do	8. 4	8. 3	8. 2	9. 0	9. 0	9. 0	8. 0	7. 6	7. 6	10. 6	10. 5	10. 0
Corn flakes, 8-ounce package	8. 9	8. 6	8. 6	9. 8	9. 6	9. 8	9. 4	9. 8	9. 8	9. 6	9. 6	9. 6
Wheat cereal, 28-ounce package	25. 4	24. 4	24. 8	24. 6	25. 1	24. 9	25. 6	25. 6	25. 8	26. 8	26. 8	27. 0
Macaroni, pound	20. 5	20. 6	20. 5	22. 6	22. 7	22. 6	22. 7	23. 4	23. 5	18. 5	18. 0	18. 3
Rice, do	10. 3	10. 1	10. 2	11. 0	11. 1	10. 7	11. 1	11. 1	11. 3	9. 9	10. 1	10. 2
Beans, navy, do	11. 5	15. 3	15. 2	12. 7	14. 8	13. 9	11. 8	14. 6	14. 7	12. 3	15. 0	14. 0
Potatoes, do	2. 2	4. 5	4. 5	2. 1	3. 9	3. 8	1. 9	3. 5	3. 5	2. 1	3. 4	3. 8
Onions, do	6. 2	4. 7	4. 7	6. 6	6. 2	5. 7	6. 1	4. 8	4. 6	4. 8	4. 0	3. 7
Cabbage, do	5. 4	5. 1	4. 4	4. 8	5. 7	5. 1	3. 8	3. 8	3. 5	3. 9	3. 3	3. 2
Beans, baked, No. 2 can	11. 2	11. 2	10. 7	12. 7	13. 2	12. 5	15. 0	15. 7	15. 7	12. 3	13. 5	13. 3
Corn, canned, do	15. 3	14. 6	14. 8	16. 2	16. 4	16. 2	14. 1	14. 3	14. 2	17. 9	18. 8	18. 8
Peas, canned, do	15. 5	14. 8	15. 5	17. 0	16. 7	16. 8	17. 5	17. 9	18. 1	17. 0	17. 3	17. 3
Tomatoes, canned, do	11. 6	12. 7	12. 1	12. 1	14. 4	13. 3	11. 5	13. 3	13. 3	[4] 15. 6	[4] 15. 7	[4] 15. 9
Sugar, pound	6. 3	6. 1	6. 1	7. 1	6. 8	7. 0	6. 8	6. 5	6. 6	6. 8	6. 9	6. 9
Tea, do	71. 2	72. 3	73. 2	82. 1	83. 0	86. 1	62. 2	61. 5	61. 5	77. 2	77. 4	77. 8
Coffee, do	44. 3	43. 8	43. 5	49. 3	50. 0	49. 8	53. 4	52. 8	52. 3	52. 9	52. 9	53. 0
Prunes, do	12. 4	13. 4	15. 1	13. 8	16. 2	17. 7	12. 1	14. 3	14. 6	13. 4	15. 1	14. 3
Raisins, do	11. 4	11. 5	11. 8	12. 5	12. 2	12. 5	12. 1	11. 3	11. 4	11. 6	11. 5	12. 2
Bananas, dozen	29. 4	28. 9	29. 4	38. 5	36. 5	37. 7	[2] 10. 7	[2] 10. 1	[2] 10. 4	[2] 10. 6	[2] 10. 4	[2] 10. 5
Oranges, do	68. 5	41. 6	45. 4	69. 6	49. 2	49. 2	74. 5	52. 2	50. 7	61. 9	31. 0	31. 6

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.
[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article		Providence, R. I.			Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.		
		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
			Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak	pound	[1]82.7	[1]81.6	[1]81.2	48.7	50.8	51.5	50.6	51.2	49.9	47.3	48.5	46.8
Round steak	do	58.9	59.6	59.7	43.7	46.0	45.1	44.3	44.6	43.5	46.0	47.9	45.6
Rib roast	do	45.2	45.5	44.8	37.2	38.0	36.8	36.4	36.8	36.5	37.1	38.0	36.7
Chuck roast	do	35.8	36.5	36.7	29.4	30.8	30.2	32.5	32.5	32.2	29.2	30.4	29.5
Plate beef	do	25.0	28.5	27.8	22.1	22.7	23.5	19.6	20.2	19.9	20.5	22.1	21.9
Pork chops	do	42.6	46.3	43.6	38.3	41.4	38.9	40.8	44.8	43.1	34.6	39.8	36.0
Bacon, sliced	do	43.0	41.5	41.7	40.9	40.1	40.1	41.1	39.7	38.4	41.7	42.4	41.9
Ham, sliced	do	58.2	59.3	58.2	46.5	44.5	45.3	56.2	55.9	54.2	53.8	56.4	54.1
Lamb, leg of	do	39.8	41.7	40.1	44.4	44.8	44.7	38.0	37.8	36.7	37.2	38.8	37.6
Hens	do	42.9	44.2	42.9	35.1	36.9	35.5	41.4	41.6	41.0	34.7	36.9	35.6
Salmon, canned, red	do	32.4	30.5	30.8	32.5	32.3	32.1	33.1	30.9	30.8	32.2	32.3	32.5
Milk, fresh	quart	15.7	15.7	15.8	14.0	14.0	14.0	13.5	13.5	14.0	13.0	13.0	13.0
Milk, evaporated	16-ounce can	11.7	11.2	11.1	12.4	11.9	11.8	11.4	10.7	10.5	10.8	9.8	9.7
Butter	pound	57.2	55.3	55.8	61.6	56.7	57.8	57.5	54.6	54.5	58.9	56.2	56.6
Oleomargarine (all butter substitutes)	pound	26.7	25.5	25.1	29.8	29.8	29.5	28.4	27.8	27.3	28.4	25.8	25.8
Cheese	do	39.1	38.4	38.6	37.1	36.3	36.4	39.1	38.8	38.2	37.6	36.0	35.8
Lard	do	19.0	17.8	17.6	18.7	17.6	17.7	18.3	17.1	16.8	16.5	15.3	15.1
Vegetable lard substitute	do	26.6	26.5	26.0	25.8	25.1	25.4	26.3	26.3	25.9	25.3	25.1	25.5
Eggs, strictly fresh	dozen	74.5	72.1	76.9	50.1	49.0	51.7	60.5	55.0	64.0	45.5	46.0	49.3
Bread	pound	9.0	9.0	9.0	8.9	8.8	8.7	9.1	8.3	8.3	9.4	9.1	9.1
Flour	do	5.3	5.6	5.6	5.4	5.5	5.5	5.2	5.4	5.1	5.0	5.0	5.0
Corn meal	do	5.1	5.1	5.1	4.9	4.8	4.8	6.3	5.7	5.9	4.2	4.7	4.7
Rolled oats	do	8.9	9.0	8.8	8.5	8.7	8.7	9.2	8.9	8.6	8.1	8.0	8.0
Corn flakes	8-ounce package	9.3	9.3	9.3	9.6	9.6	9.6	9.3	9.3	9.1	9.0	9.3	9.4
Wheat cereal	28-ounce package	24.8	24.8	24.8	26.0	25.4	25.9	25.3	25.4	25.0	24.6	24.2	24.3
Macaroni	pound	22.5	22.0	23.0	20.2	20.3	20.6	20.4	19.0	19.9	19.8	20.1	19.7
Rice	do	10.2	9.7	9.8	11.4	10.5	10.4	9.0	8.8	9.1	9.8	10.0	9.7
Beans, navy	do	13.1	13.8	14.0	13.0	14.4	14.4	12.4	14.5	14.2	12.3	14.1	13.3
Potatoes	do	1.9	3.5	3.3	2.3	4.1	4.4	1.8	3.7	2.9	1.9	4.0	3.9
Onions	do	6.4	5.4	5.1	7.2	6.6	5.2	5.6	5.7	5.1	5.6	5.9	5.6
Cabbage	do	5.3	5.7	5.0	4.9	5.2	4.5	3.3	3.8	3.0	3.4	4.9	3.9
Beans, baked	No. 2 can	11.1	11.5	11.6	11.1	11.3	11.4	10.4	10.8	11.0	10.4	10.6	10.6
Corn, canned	do	17.4	16.8	16.6	15.3	15.8	15.4	16.4	16.2	16.0	15.3	14.9	14.9
Peas, canned	do	18.3	18.3	17.9	17.9	18.2	17.9	17.7	16.8	17.4	14.6	15.0	14.9
Tomatoes, canned	do	12.9	13.5	13.5	10.7	12.0	11.5	14.4	15.9	15.8	10.7	12.9	12.4
Sugar	pound	6.6	6.3	6.4	6.9	6.5	6.6	6.3	6.2	6.2	6.8	6.8	6.8
Tea	do	60.7	60.1	59.8	9.13	96.1	94.5	72.8	67.6	73.9	74.6	73.8	73.1
Coffee	do	52.7	51.6	52.1	48.0	47.1	48.0	49.1	47.5	45.5	46.8	46.8	46.2
Prunes	do	12.7	15.2	15.5	14.5	14.4	16.7	14.7	15.1	16.1	15.1	17.2	18.7
Raisins	do	13.1	11.9	11.7	12.3	11.4	12.1	12.9	12.2	12.4	11.5	11.9	12.3
Bananas	dozen	32.9	31.4	31.4	35.9	34.3	33.1	27.5	27.5	30.7	32.5	31.5	30.8
Oranges	do	78.4	57.6	56.3	63.8	39.6	40.5	66.6	45.9	54.0	60.3	45.2	45.3

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	St. Paul, Minn.			Salt Lake City, Utah			San Francisco, Calif.			Savannah, Ga.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak, pound	42.2	44.0	43.0	39.3	40.5	39.3	41.2	41.0	40.2	40.5	42.8	42.8
Round steak, do	37.4	38.8	38.1	38.0	39.1	37.7	39.9	39.0	38.5	34.1	38.3	37.2
Rib roast, do	33.7	34.4	34.4	30.1	32.7	32.5	37.4	35.7	35.4	32.3	34.7	32.4
Chuck roast, do	28.4	29.7	28.6	26.3	27.7	26.9	26.5	24.9	24.5	23.1	27.0	25.8
Plate beef, do	17.9	18.5	18.3	19.0	20.4	20.3	21.3	19.8	19.2	18.8	22.3	21.0
Pork chops, do	33.1	37.3	35.2	40.2	40.6	40.5	44.4	44.2	42.3	31.8	33.7	32.6
Bacon, sliced, do	44.9	44.6	42.8	45.2	45.2	45.2	56.9	56.9	56.5	40.6	39.2	38.5
Ham, sliced, do	50.6	51.7	49.2	57.7	58.8	58.8	63.5	64.8	63.8	46.0	47.0	47.0
Lamb, leg of, do	31.6	32.9	31.7	37.4	38.0	37.4	40.3	39.5	38.9	40.8	39.5	38.3
Hens, do	32.2	33.8	33.6	34.6	34.8	35.0	41.6	45.1	42.5	31.1	33.6	36.3
Salmon, canned, red, do	37.3	36.4	36.8	33.3	32.8	32.2	29.3	28.6	29.8	33.1	33.3	33.1
Milk, fresh, quart	12.0	12.0	12.0	10.0	10.0	10.0	14.0	14.0	14.0	17.0	17.5	18.0
Milk, evaporated, 16-ounce can	11.9	11.2	11.0	10.2	10.0	10.0	10.0	9.9	9.9	11.4	10.3	10.2
Butter, pound	52.1	51.0	52.3	54.5	52.1	53.0	59.4	56.8	58.1	58.9	54.7	54.9
Oleomargarine (all butter substitutes), pound	24.4	23.7	23.5	25.6	30.2	30.3	25.3	24.9	24.9	30.1	30.1	30.6
Cheese, do	36.8	35.5	35.7	31.3	29.4	29.6	40.5	40.8	41.1	35.4	33.9	33.5
Lard, do	19.5	18.9	18.8	21.5	19.9	19.9	23.2	22.7	22.5	18.1	18.7	18.5
Vegetable lard substitute, do	28.0	27.0	27.0	29.7	29.3	29.5	27.6	27.8	27.8	17.3	17.2	15.5
Eggs, strictly fresh, dozen	41.8	43.8	46.3	47.9	47.3	55.7	52.7	50.7	59.0	57.1	51.7	58.5
Bread, pound	9.3	9.3	9.3	9.6	9.7	9.6	9.1	9.3	9.3	10.6	10.6	10.6
Flour, do	4.8	5.0	5.0	3.7	3.6	3.7	5.4	5.2	5.2	6.5	6.3	6.3
Corn meal, do	5.1	5.2	5.3	5.6	5.9	6.0	7.4	7.0	7.1	3.7	3.6	3.7
Rolled oats, do	10.1	9.9	9.9	8.8	8.4	8.4	10.1	9.8	9.7	8.5	8.4	8.6
Corn flakes, 8-ounce package	10.4	10.1	10.1	10.0	10.2	10.2	9.7	9.6	9.6	9.5	9.7	9.6
Wheat cereal, 28-ounce package	26.3	26.0	26.0	25.5	25.1	25.4	25.2	25.2	25.4	24.3	24.1	24.1
Macaroni, pound	18.6	18.7	18.7	19.6	19.9	19.9	16.3	15.8	16.2	18.0	17.8	17.4
Rice, do	10.5	10.4	10.3	8.6	9.0	9.4	9.5	9.6	9.8	9.1	9.3	8.8
Beans, navy, do	14.0	14.4	14.5	11.2	12.6	12.4	11.1	14.5	13.8	12.8	15.3	15.4
Potatoes, do	1.2	3.0	2.7	1.4	2.8	2.6	2.7	4.3	4.3	3.0	4.3	4.3
Onions, do	5.2	5.2	5.1	4.0	4.5	3.9	4.4	4.3	4.4	6.9	6.5	5.9
Cabbage, do	3.0	4.8	3.8	3.0	3.3	3.2	----	----	----	5.1	4.7	4.9
Beans, baked, No. 2 can	13.6	14.0	14.0	12.4	12.4	12.5	12.6	12.9	12.6	11.8	10.7	10.8
Corn, canned, do	15.1	15.1	15.1	14.1	14.2	13.8	17.3	17.3	17.1	15.2	14.8	15.0
Peas, canned, do	14.9	14.9	14.9	15.1	14.8	15.0	18.0	17.6	17.9	16.0	16.2	16.6
Tomatoes, canned, do	14.1	14.8	14.8	13.5	14.0	14.1	[4] 14.6	[4] 16.0	[4] 15.9	10.0	10.0	10.0
Sugar, pound	7.2	6.8	7.1	7.4	7.1	7.2	6.5	6.4	6.5	6.7	6.3	6.6
Tea, do	67.7	72.7	72.7	86.6	84.7	84.7	71.5	73.3	74.4	79.9	81.8	81.2
Coffee, do	53.6	53.3	53.3	54.7	54.7	54.7	53.9	52.9	52.7	46.3	45.8	44.9
Prunes, do	14.0	16.6	17.5	13.1	14.6	14.8	11.4	14.3	15.0	13.5	16.5	17.8
Raisins, do	14.1	13.9	13.9	12.7	12.2	12.2	10.5	10.5	10.8	12.3	11.5	11.7
Bananas, dozen	[3] 10.2	[3] 10.2	[3] 10.8	[3] 12.8	[3] 11.3	[3] 11.6	27.0	29.4	30.0	30.6	31.0	31.0
Oranges, do	64.6	41.9	40.7	62.1	35.7	36.3	61.0	42.3	35.9	50.9	44.8	39.0

[3] Per pound.

[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

Article	Scranton, Pa.			Seattle, Wash.			Springfield, Ill.			Washington, D. C.		
	Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929		Oct. 15, 1928	1929	
		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15		Sept. 15	Oct. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	64.4	65.4	64.0	42.1	45.0	43.8	43.9	44.6	41.8	56.7	57.5	56.3
Round steak, do	54.1	55.7	54.6	38.0	39.7	38.9	43.9	44.8	42.3	50.0	52.3	50.1
Rib roast, do	46.1	43.4	42.2	34.1	35.4	34.3	32.8	33.8	32.9	41.1	41.2	39.4
Chuck roast, do	38.1	36.5	35.8	27.3	27.1	26.5	29.7	30.9	28.5	34.5	33.9	33.1
Plate beef, do	20.6	20.4	20.1	21.0	20.6	21.1	21.8	21.4	20.7	23.0	21.6	22.1
Pork chops, do	40.2	46.6	44.3	39.4	42.4	41.2	33.1	35.7	35.5	37.3	43.8	41.9
Bacon, sliced, do	48.1	47.7	47.4	56.2	54.5	54.0	45.3	42.7	42.7	43.4	44.8	43.1
Ham, sliced, do	60.5	61.3	61.7	60.9	60.5	60.0	52.3	53.6	50.5	59.7	58.6	58.3
Lamb, leg of, do	44.0	46.3	44.0	37.4	37.4	36.5	39.6	41.6	40.4	40.1	41.2	39.7
Hens, do	44.1	46.2	44.5	34.5	36.6	35.5	33.7	34.7	34.0	41.9	42.2	41.6
Salmon, canned, red, do	34.4	32.9	33.3	33.9	33.1	33.8	34.3	34.3	34.1	30.9	30.4	30.1
Milk, fresh, quart	13.0	14.0	14.0	12.0	12.0	13.0	14.4	14.4	14.4	15.0	14.8	14.8
Milk, evaporated, 16-ounce can	12.0	11.4	11.4	10.2	10.1	10.1	12.0	10.6	10.8	11.9	11.4	11.0
Butter, pound	59.5	55.6	56.7	58.9	56.6	56.8	54.5	53.5	53.7	60.8	57.6	57.2
Oleomargarine (all butter substitutes), pound	26.0	27.8	26.8	25.6	25.0	25.0	28.2	28.2	28.1	26.8	26.5	26.5
Cheese, do	39.2	38.6	38.4	35.4	35.4	35.5	37.4	37.4	37.0	40.8	39.9	39.9
Lard, do	20.3	19.8	19.4	20.4	19.5	19.4	19.3	17.8	17.6	19.4	18.3	17.2
Vegetable lard substitute, do	25.6	26.4	26.6	26.8	26.6	26.6	27.8	27.4	27.4	25.1	24.6	24.6
Eggs, strictly fresh, dozen	62.5	59.4	66.8	52.9	53.9	59.0	44.3	44.7	46.9	62.1	56.2	61.7
Bread, pound	10.0	9.8	9.8	9.6	9.6	9.7	10.2	10.1	10.1	8.9	8.9	8.9
Flour, do	5.6	5.7	5.7	4.7	4.8	4.7	4.8	4.8	4.7	5.6	5.7	5.6
Corn meal, do	7.5	7.6	7.6	5.7	6.1	6.2	4.7	4.8	4.8	5.1	5.1	5.0
Rolled oats, do	9.8	9.9	9.9	8.7	9.7	9.6	10.0	9.6	9.5	9.1	9.1	9.0
Corn flakes, 8-ounce package	9.9	9.8	9.8	9.6	9.8	9.9	9.9	9.5	9.5	9.4	9.2	9.1
Wheat cereal, 28-ounce package	25.2	25.5	25.5	26.7	26.6	26.6	28.1	27.2	27.1	24.8	24.5	24.4
Macaroni, pound	22.5	22.7	22.7	17.7	17.3	17.5	19.0	18.9	18.9	22.9	22.0	21.6
Rice, do	10.4	10.0	9.8	10.5	9.9	10.0	10.1	9.7	10.1	10.7	11.2	10.9
Beans, navy, do	12.1	14.7	14.8	12.7	15.9	14.9	13.2	14.0	13.8	12.6	13.8	13.7
Potatoes, do	1.9	4.0	3.8	1.8	3.2	3.2	1.7	3.6	3.7	2.5	4.5	4.2
Onions, do	6.1	5.3	5.1	4.8	4.1	3.7	5.8	6.0	4.9	7.2	6.1	5.4
Cabbage, do	4.5	4.3	3.9	3.7	3.8	3.5	3.1	5.0	4.3	4.8	5.3	4.4
Beans, baked, No. 2 can	11.8	12.2	12.2	11.3	12.4	12.4	11.1	11.0	11.0	10.7	10.8	10.9
Corn, canned, do	17.2	16.9	16.9	18.1	17.6	17.6	15.0	14.9	14.9	15.3	15.4	15.2
Peas, canned, do	17.3	17.3	17.5	18.5	18.2	18.2	15.8	15.9	15.9	15.0	15.9	16.4
Tomatoes, canned, do	12.3	13.4	13.3	[4] 15.9	[4] 16.5	[4] 16.3	14.0	14.9	14.9	10.2	11.3	10.4
Sugar, pound	6.8	6.6	6.7	6.7	6.5	6.6	7.5	7.1	7.1	6.6	6.5	6.4
Tea, do	68.3	66.1	66.1	77.6	79.7	79.7	83.5	82.7	82.7	95.8	91.6	91.0
Coffee, do	50.9	50.4	49.6	52.6	51.4	51.2	51.4	51.4	51.4	47.6	46.1	46.2
Prunes, do	14.1	15.4	16.6	12.6	15.9	16.5	14.2	16.6	17.3	14.7	16.0	16.6
Raisins, do	13.1	11.8	12.2	11.7	10.7	10.9	12.8	12.7	12.8	13.5	13.2	13.3
Bananas, dozen	30.8	30.8	30.0	[3] 10.7	[3] 10.1	[3] 10.1	[3] 9.7	[3] 9.6	[3] 9.5	29.3	30.9	30.5
Oranges, do	73.4	49.5	49.4	59.1	31.6	35.4	71.9	41.5	45.6	71.6	46.1	46.9

[3] Per pound. [4] No. 2½ can.

Comparison of Retail Food Costs in 51 Cities

TABLE 6 shows for 39 cities the percentage of increase or decrease in the retail cost of food [3] in October, 1929, compared with the average cost in the year 1913, in October, 1928, and September, 1929. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[4]

[3] For list of articles, see note 1, p. 197.

[4] The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1921, p. 26.

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of October, 99.2 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 41 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Baltimore, Boston, Bridgeport, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Fall River, Houston, Indianapolis, Jacksonville, Kansas City, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Peoria, Philadelphia, Pittsburgh, Portland, Me., Portland, Oreg., Providence, Richmond, Rochester, St. Louis, St. Paul, Salt Lake City, Savannah, Scranton, and Springfield, Ill.

TABLE 6.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN OCTOBER, 1929, COMPARED WITH THE COST IN SEPTEMBER, 1929, OCTOBER, 1928, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase October, 1929, compared with—		Percentage decrease October, 1929, compared with September, 1929	City	Percentage increase October, 1929, compared with—		Percentage decrease October, 1929, compared with September, 1929
	1913	October, 1928			1913	October, 1928	
Atlanta	63.5	1.5	0.3	Minneapolis	60.8	5.1	0.4
Baltimore	66.1	3.3	[1] 0.1	Mobile		[2] 0.9	1.0
Birmingham	62.2	0.0	0.0	Newark	56.2	2.3	[1] 0.6
Boston	62.5	2.1	[1] 0.5	New Haven	64.6	2.4	0.2
Bridgeport		0.9	0.3	New Orleans	59.3	2.2	0.2
Buffalo	65.7	2.1	0.2	New York	64.8	2.6	[1] 0.4
Butte		4.4	[1] 0.5	Norfolk		1.3	0.6
Charleston, S. C	62.2	1.9	0.0	Omaha	52.3	1.9	0.4
Chicago	70.4	1.8	0.3	Peoria		3.7	0.1
Cincinnati	66.7	3.8	[1] 0.6	Philadelphia	65.0	3.3	[1] 0.4
Cleveland	56.9	1.7	1.7	Pittsburgh	62.6	1.2	0.6
Columbus		3.7	[1] 1.0	Portland, Me		0.5	0.7
Dallas	59.4	1.0	0.3	Portland, Oreg	49.0	3.2	[1] 1.6
Denver	43.6	1.4	[1] 1.0	Providence	64.3	1.9	0.0
Detroit	66.4	2.6	1.8	Richmond	66.6	1.6	[1] 0.3
Fall River	59.6	0.5	0.3	Rochester		0.1	0.2
Houston		2.9	0.2	St. Louis	63.0	3.6	1.2
Indianapolis	60.0	5.6	0.4	St. Paul		4.1	0.9
Jacksonville	49.7	0.4	0.0	Salt Lake City	40.4	3.1	[1] 0.9
Kansas City	58.0	5.0	0.8	San Francisco	59.2	2.4	[1] 1.1
Little Rock	55.3	4.4	0.3	Savannah		2.1	[1] 0.6
Los Angeles	51.4	1.1	[1] 0.1	Scranton	70.1	3.1	[1] 0.2
Louisville	58.1	1.7	0.5	Seattle	54.7	3.7	[1] 1.4
Manchester	57.9	1.1	0.6	Springfield, Ill		3.0	0.7
Memphis	51.9	0.2	1.0	Washington	69.0	0.2	1.0
Milwaukee	64.5	4.6	[1] 0.1				

[1] Increase. [2] Decrease.

Retail Price of Coal in the United States [5]

THE following table shows the average retail prices of coal on October 15, 1928, and September 15 and October 15, 1929, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered

[5] Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929

City, and kind of coal	1928	1929	
	Oct. 15	Sept. 15	Oct. 15
United States:			
Pennsylvania anthracite—			
Stove—			
Average price	$15.26	$15.21	$15.31
Index (1913=100)	197.6	196.8	198.2
Chestnut—			
Average price	$14.98	$14.87	$14.98
Index (1913=100)	189.3	187.9	189.3
Bituminous—			
Average price	$8.96	$8.87	$8.98
Index (1913=100)	164.8	163.2	165.3
Atlanta, Ga.:			
Bituminous, prepared sizes	$8.02	$7.78	$7.78
Baltimore, Md.:			
Pennsylvania anthracite—			
Stove	[1] 16.00	14.25	14.25
Chestnut	[1] 15.50	13.75	13.75
Bituminous, run of mine—			
High volatile	8.00	7.88	7.89
Birmingham, Ala.:			
Bituminous, prepared sizes	7.56	7.39	7.61
Boston, Mass.:			
Pennsylvania anthracite—			
Stove	16.00	15.95	16.00
Chestnut	15.75	15.45	15.50
Bridgeport, Conn.:			
Pennsylvania anthracite—			
Stove	15.50	15.25	15.50
Chestnut	15.50	15.25	15.50
Buffalo, N. Y.:			
Pennsylvania anthracite—			
Stove	13.93	13.51	13.76
Chestnut	13.56	13.01	13.31
Butte, Mont.:			
Bituminous, prepared sizes	10.92	11.14	11.14
Charleston, S. C.:			
Bituminous, prepared sizes	9.67	9.67	9.67
Chicago, Ill.:			
Pennsylvania anthracite—			
Stove	16.75	16.63	16.85
Chestnut	16.45	16.18	16.40
Bituminous—			
Prepared sizes—			
High volatile	8.53	8.22	8.42
Low volatile	11.85	11.10	12.35
Run of mine—			
Low volatile	8.25	8.00	8.25
Cincinnati, Ohio:			
Bituminous—			
Prepared sizes—			
High volatile	5.50	5.95	6.05
Low volatile	7.69	7.88	8.38
Cleveland, Ohio:			
Pennsylvania anthracite—			
Stove	15.40	15.19	15.22
Chestnut	15.02	14.75	14.80
Bituminous—			
Prepared sizes—			
High volatile	7.28	7.03	7.10
Low volatile	9.81	9.64	9.96
Columbus, Ohio:			
Bituminous—			
Prepared sizes—			
High volatile	$5.93	$6.21	$6.13
Low volatile	7.94	7.81	8.44
Dallas, Tex.:			
Arkansas anthracite—Egg	15.50	14.75	15.50
Bituminous, prepared sizes	13.08	12.67	12.83
Denver, Colo.:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	15.95	14.75	14.75
Stove, 3 and 5 mixed	15.95	14.75	14.75
Bituminous, prepared sizes	10.57	10.31	10.31
Detroit, Mich.:			
Pennsylvania anthracite—			
Stove	16.00	16.00	16.00
Chestnut	15.50	15.50	15.50
Bituminous—			
Prepared sizes—			
High volatile	8.31	8.39	8.46
Low volatile	9.91	10.20	10.27
Run of mine—			
Low volatile	7.67	8.00	8.00
Fall River, Mass.:			
Pennsylvania anthracite—			
Stove	16.50	16.50	16.50
Chestnut	16.25	16.25	16.25
Houston, Tex.:			
Bituminous, prepared sizes	12.00	12.20	12.20
Indianapolis, Ind.:			
Bituminous—			
Prepared sizes—			
High volatile	6.38	6.08	6.31
Low volatile	9.00	8.32	9.04
Run of mine—			
Low volatile	7.00	6.92	7.25
Jacksonville, Fla.:			
Bituminous, prepared sizes	13.00	12.00	13.00
Kansas City, Mo.:			
Arkansas anthracite—			
Furnace	12.60	12.45	12.45
Stove No. 4	14.17	13.42	13.58
Bituminous, prepared sizes	7.23	7.20	7.28
Little Rock, Ark.:			
Arkansas anthracite—Egg	13.50	12.75	12.50
Bituminous, prepared sizes	9.80	9.35	9.55
Los Angeles, Calif.:			
Bituminous, prepared sizes	16.25	16.50	16.50
Louisville, Ky.:			
Bituminous—			
Prepared sizes—			
High volatile	6.62	6.66	6.66
Low volatile	9.25	9.00	9.00
Manchester, N. H.:			
Pennsylvania anthracite—			
Stove	17.25	17.00	17.00
Chestnut	17.00	17.00	17.00
Memphis, Tenn.:			
Bituminous, prepared sizes	6.43	7.41	7.37

[1] Per ton of 2,240 pounds.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON OCTOBER 15, 1928, AND SEPTEMBER 15 AND OCTOBER 15, 1929—Continued

City, and kind of coal	1928	1929	
	Oct. 15	Sept. 15	Oct. 15
Milwaukee, Wis.:			
Pennsylvania anthracite—			
Stove	$16.20	$16.20	$16.29
Chestnut	15.90	15.75	15.84
Bituminous—			
Prepared sizes—			
High volatile	7.80	7.68	7.71
Low volatile	10.63	10.88	10.96
Minneapolis, Minn.:			
Pennsylvania anthracite—			
Stove	18.20	18.20	18.30
Chestnut	17.90	17.75	17.85
Bituminous—			
Prepared sizes—			
High volatile	10.94	10.53	10.53
Low volatile	13.53	13.65	13.65
Mobile, Ala.:			
Bituminous, prepared sizes	9.69	9.15	9.37
Newark, N. J.:			
Pennsylvania anthracite—			
Stove	14.00	13.89	13.95
Chestnut	13.50	13.39	13.45
New Haven, Conn.:			
Pennsylvania anthracite—			
Stove	14.90	14.85	14.96
Chestnut	14.89	14.85	14.96
New Orleans, La.:			
Bituminous, prepared sizes	10.21	9.14	10.64
New York, N. Y.:			
Pennsylvania anthracite—			
Stove	14.75	14.33	14.54
Chestnut	14.25	13.83	14.04
Norfolk, Va.:			
Pennsylvania anthracite—			
Stove	14.00	14.50	14.00
Chestnut	14.00	14.50	14.00
Bituminous—			
Prepared sizes—			
High volatile	7.81	7.81	7.38
Low volatile	9.50	9.50	9.00
Run of mine—			
Low volatile	7.00	7.00	6.83
Omaha, Nebr.:			
Bituminous, prepared sizes	9.58	9.69	9.67
Peoria, Ill.:			
Bituminous, prepared sizes	6.81	6.62	6.67
Philadelphia, Pa.:			
Pennsylvania anthracite—			
Stove	[1] 14.29	[1] 15.00	[1] 15.00
Chestnut	[1] 13.96	[1] 14.50	[1] 14.50
Pittsburgh, Pa.:			
Pennsylvania anthracite—			
Chestnut	14.88	15.00	15.00
Bituminous, prepared sizes	5.31	5.11	5.36
Portland, Me.:			
Pennsylvania anthracite—			
Stove	16.80	16.80	16.80
Chestnut	16.80	16.80	16.80
Portland, Oreg.:			
Bituminous, prepared sizes	13.13	12.79	13.38
Providence, R. I.:			
Pennsylvania anthracite—			
Stove	[2] 16.00	[2] 16.00	[2] 16.00
Chestnut	[2] 16.00	[2] 16.00	[2] 15.94
Richmond, Va.:			
Pennsylvania anthracite—			
Stove	$14.33	$14.00	$15.00
Chestnut	14.33	14.00	15.00
Bituminous—			
Prepared sizes—			
High volatile	8.13	7.75	8.38
Low volatile	9.17	8.53	9.11
Run of mine—			
Low volatile	7.25	6.75	7.25
Rochester, N. Y.:			
Pennsylvania anthracite—			
Stove	14.50	14.50	14.75
Chestnut	14.25	14.00	14.25
St. Louis, Mo.:			
Pennsylvania anthracite—			
Stove	16.65	16.65	16.65
Chestnut	16.40	16.40	16.40
Bituminous, prepared sizes	6.11	6.71	6.76
St. Paul, Minn.:			
Pennsylvania anthracite—			
Stove	18.20	18.20	18.30
Chestnut	17.90	17.75	17.85
Bituminous—			
Prepared sizes—			
High volatile	10.68	10.28	10.28
Low volatile	13.50	13.65	13.65
Salt Lake City, Utah:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	18.00	18.00	18.00
Stove, 3 and 5 mixed	18.00	18.00	18.00
Bituminous, prepared sizes	8.42	7.96	7.93
San Francisco, Calif.:			
New Mexico anthracite—			
Cerillos egg	26.00	26.00	26.00
Colorado anthracite—			
Egg	25.50	25.50	25.50
Bituminous, prepared sizes	17.13	17.13	17.13
Savannah, Ga.:			
Bituminous, prepared sizes	[3] 10.62	[3] 9.74	[3] 10.14
Scranton, Pa.:			
Pennsylvania anthracite—			
Stove	10.53	10.27	10.28
Chestnut	10.33	9.90	9.92
Seattle, Wash.:			
Bituminous, prepared sizes	10.48	10.65	10.68
Springfield, Ill.:			
Bituminous, prepared sizes	4.24	4.34	4.34
Washington, D. C.:			
Pennsylvania anthracite—			
Stove	[1] 15.33	[1] 15.58	[1] 15.73
Chestnut	[1] 14.96	[1] 15.08	[1] 15.23
Bituminous—			
Prepared sizes—			
High volatile	[1] 8.63	[1] 8.63	[1] 8.63
Low volatile	[1] 10.92	[1] 11.42	[1] 11.42
Run of mine—			
Mixed	[1] 7.60	[1] 7.75	[1] 7.75

[1] Per ton of 2,240 pounds.

[2] The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

[3] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

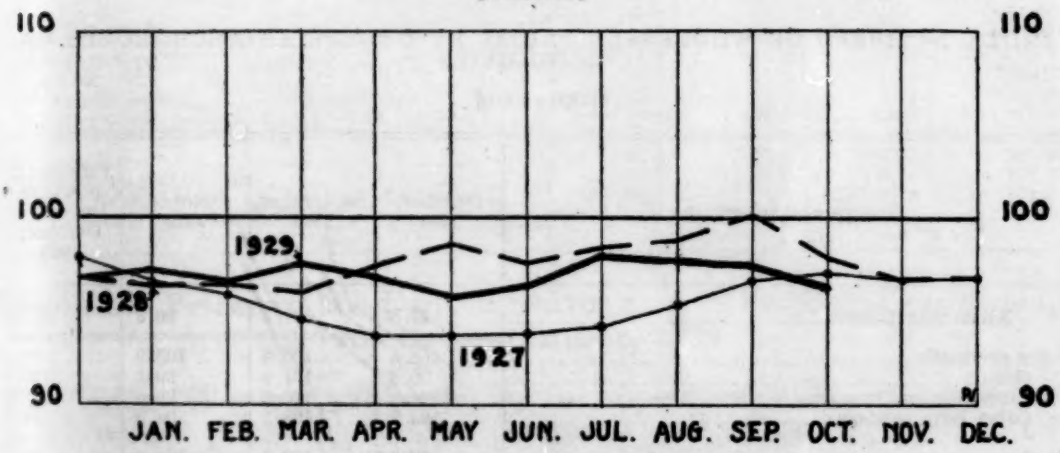
Index Numbers of Wholesale Prices in October, 1929

A FURTHER decline in the general level of wholesale prices is shown for October by information collected in leading markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, with prices in 1926 as 100.0, stands at 96.3 for October compared with 97.5 for September, a decrease of 1¼ per cent. Compared with October, 1928, with an index number of 97.8, a decrease of 1½ per cent is shown. Based on these figures, the purchasing power of the dollar in October was 103.8 compared with 100.0 in the year 1926.

Farm products showed a pronounced price decline from the September level, due to decreases for grains, cattle, hogs, sheep and lambs, poultry, cotton, onions, and wool. Eggs, hay, flaxseed, lemons, and oranges, on the other hand, averaged higher than in September. Only minor price changes were reported for milk and potatoes. The decrease in the group as a whole was over 2½ per cent.

TREND OF WHOLESALE PRICES

[1926=100]



Among foods there were price declines for butter, fresh and cured meats, lard, flour, corn meal, coffee, and canned vegetables, resulting in a net decline for the group of almost 2 per cent. Both granulated and raw sugar advanced slightly.

Hides and skins reacted from their recent upward movement, while leather advanced. No change in the price level is shown for boots and shoes and other leather products.

Prices of cotton textiles and woolen and worsted goods were mostly unchanged from those of September, while silk and rayon and other textiles, including burlap, manila hemp, and jute declined.

Fuel and lighting materials again averaged somewhat higher, due to advances in anthracite and bituminous coal. Petroleum products also tended upward, while coke was unchanged.

In the group of metals and metal products prices generally were downward, nonferrous metals as well as iron and steel products sharing in the decline.

Among building materials lumber, brick, and paint materials, advanced, while cement and structural steel declined.

Chemicals and drugs showed a small price increase over September level, although prepared fertilizers were slightly cheaper. No change in the price level was reported for the group of house-furnishing goods.

In the group designated as miscellaneous, there were small decreases reported for cattle feed, paper and pulp, crude rubber, and automobile tires.

Raw materials and finished products as a whole were cheaper than in September, while semimanufactured articles were slightly higher. Nonagricultural commodities as a group declined in price.

Of the 550 commodities or price series for which comparable information for September and October was collected, increases were reported in 92 instances and decreases in 180 instances. In 278 instances no change in price was reported.

Comparing prices in October with those of a year ago, as measured by changes in these index numbers, it is seen that hides and leather products were considerably lower, and fuel and lighting materials, textiles, foods, and chemicals and drugs, were somewhat lower. A minor price increase is shown for house-furnishing goods, while metals and metal products and building materials were appreciably higher.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	October, 1928	September, 1929	October, 1929	Purchasing power of the dollar October, 1929
All commodities	97.8	97.5	96.3	103.8
Farm products	103.5	106.6	103.9	96.2
Grains	96.6	101.6	99.1	100.9
Livestock and poultry	106.4	106.6	98.8	101.2
Other farm products	103.9	108.3	108.9	91.8
Foods	102.3	103.2	101.2	98.8
Butter, cheese, and milk	108.4	106.5	106.2	94.2
Meats	116.4	113.1	106.7	93.7
Other foods	91.2	95.9	95.8	104.4
Hides and leather products	117.5	110.8	110.5	90.5
Hides and skins	129.9	121.3	117.9	84.8
Leather	124.2	112.4	114.2	87.6
Boots and shoes	110.4	106.1	106.1	94.3
Other leather products	109.0	106.6	106.6	93.8
Textile products	96.1	93.1	92.7	107.9
Cotton goods	100.7	98.9	99.0	101.0
Silk and rayon	84.4	80.3	79.3	126.1
Woolen and worsted goods	100.0	96.2	96.2	104.0
Other textile products	86.1	83.1	80.0	125.0
Fuel and lighting	84.9	81.1	81.7	122.4
Anthracite coal	91.2	90.6	91.2	109.6
Bituminous coal	93.9	91.3	92.0	108.7
Coke	85.0	84.4	84.4	118.5
Manufactured gas	94.3	94.3	(1)	
Petroleum products	76.3	70.2	70.8	141.2
Metals and metal products	101.0	104.1	103.6	96.5
Iron and steel	95.1	97.6	96.8	103.3
Nonferrous metals	95.8	104.9	104.2	96.0
Agricultural implements	98.8	98.2	96.1	104.1
Automobiles	108.7	110.3	109.9	91.0
Other metal products	96.9	98.5	98.6	101.4

[1] Data not yet available.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES—Continued

[1926=100.0]

Groups and subgroups	October, 1928	September, 1929	October, 1929	Purchasing power of the dollar October, 1929
Building materials	95.0	97.5	97.8	102.2
Lumber	91.7	95.7	96.3	103.8
Brick	92.4	89.4	90.6	110.4
Cement	94.6	86.0	85.6	116.8
Structural steel	94.5	99.6	97.0	103.1
Paint materials	87.1	99.9	101.1	98.9
Other building materials	104.3	105.4	105.6	94.7
Chemicals and drugs	95.6	93.9	94.2	106.2
Chemicals	101.8	99.9	100.4	99.6
Drugs and pharmaceuticals	70.7	70.3	70.7	141.4
Fertilizer materials	93.8	89.9	90.1	111.0
Fertilizers	97.5	97.8	97.4	102.7
House-furnishing goods	96.5	97.1	97.1	103.0
Furniture	95.5	96.7	96.7	103.4
Furnishings	97.1	97.3	97.4	102.7
Miscellaneous	80.3	81.7	81.3	123.0
Cattle feed	128.2	132.5	130.4	76.7
Paper and pulp	89.0	88.2	87.9	113.8
Rubber	38.8	41.9	40.7	245.7
Automobile tires	60.9	55.3	55.1	181.5
Other miscellaneous	98.5	108.5	108.4	92.3
Raw materials	97.4	98.9	97.1	103.0
Semimanufactured articles	96.9	97.6	97.9	102.1
Finished products	98.5	97.0	95.8	104.4
Nonagricultural commodities	96.4	95.1	94.3	106.0

Wholesale Prices in the United States and in Foreign Countries, 1923 to September, 1929

IN THE following table the more important index numbers of wholesale prices in foreign countries and those of the United States Bureau of Labor Statistics have been brought together in order that the trend of prices in the several countries may be compared. The base periods here shown are those appearing in the sources from which the information has been drawn, in most cases being the year 1913. Only general comparisons can be made from these figures, since, in addition to differences in the base periods, there are important differences in the composition of the index numbers themselves.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES

Country	United States	Canada	Austria	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics (revised)	Dominion Bureau of Statistics (revised)	Federal Statistical Bureau	Ministry of Industry and Labor	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics (revised)	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi (revised)
Base period	1926	1926	January-June, 1914	April, 1914	July, 1914	1913	1926	1913	1913	1913
Commodities	550	502	47	128	69	118	139	45	400	100
Year and month										
1923	100.6	98.0	124	497	977	----	----	419	----	[1] 503.9
1924	98.1	99.4	136	573	997	----	----	488	137.3	[1] 497.4
1925	103.5	102.6	136	558	1008	210	----	550	141.8	[1] 612.0
1926	100.0	100.0	123	744	954	163	100	703	134.4	[1] 618.2
1927	95.4	97.7	133	847	979	153	101	617	137.6	[1] 466.7
1928	97.7	96.4	130	843	977	153	102	620	140.0	[1] 453.1
1923										
January	102.0	----	----	434	991	----	----	387	----	516.1
April	103.9	----	----	480	1012	----	----	415	----	525.7
July	98.4	----	----	504	949	----	----	407	----	503.9
October	99.4	----	----	515	960	----	----	421	----	499.6
1924										
January	99.6	----	----	580	974	----	----	494	----	504.4
April	97.3	----	----	555	1008	----	----	450	----	510.3
July	95.6	----	----	566	953	----	----	481	----	497.4
October	98.2	----	----	555	999	----	----	497	----	522.0
1925										
January	102.9	----	----	559	1045	243	----	514	----	568.2
February	104.0	----	----	551	1048	240	----	515	----	571.1
March	104.2	----	----	546	1034	236	----	514	----	571.2
April	101.9	----	----	538	1020	230	----	513	----	570.1
May	101.6	----	----	537	1006	227	----	520	----	571.2
June	103.0	----	----	552	998	223	----	543	----	590.9
July	104.3	----	----	559	1009	212	----	557	----	612.0
August	103.9	----	----	567	993	197	----	557	----	630.6
September	103.4	----	----	577	996	186	----	556	----	621.5
October	103.6	----	----	575	989	179	----	572	----	617.1
November	104.5	----	----	569	977	176	----	605	----	612.3
December	103.4	----	----	565	977	176	----	633	----	613.8
1926										
January	103.6	103.0	122	560	966	172	----	634	135.8	608.0
February	102.1	102.1	120	556	950	165	----	636	134.3	603.5
March	100.4	101.3	119	583	938	158	----	632	133.1	592.3
April	100.1	101.2	119	621	923	157	----	650	132.7	590.0
May	100.5	100.2	118	692	928	158	----	688	132.3	595.8
June	100.5	100.2	124	761	926	157	----	738	131.9	604.9
July	99.5	100.2	126	876	948	158	----	836	133.1	618.2
August	99.0	99.1	126	836	963	162	----	769	134.0	632.5
September	99.7	98.5	123	859	973	162	----	787	134.9	622.0
October	99.4	98.1	125	856	972	178	----	751	136.2	596.7
November	98.4	97.6	128	865	978	170	----	684	137.1	594.2
December	97.9	97.9	127	860	978	158	----	627	137.1	573.6
1927										
January	96.6	97.8	130	856	979	157	100	622	135.9	558.2
February	95.9	97.6	130	854	975	156	101	632	135.6	555.8
March	94.5	97.3	133	858	976	153	101	641	135.0	544.7
April	93.7	97.5	135	846	979	152	100	636	134.8	521.3
May	93.7	98.5	137	848	988	152	100	628	137.1	496.2
June	93.8	98.9	142	851	990	152	101	622	137.9	473.4
July	94.1	98.6	140	845	992	152	101	621	137.6	466.7
August	95.2	98.3	133	850	983	153	102	618	137.9	465.4
September	96.5	97.1	130	837	975	153	101	600	139.7	465.4
October	97.0	97.2	129	839	966	154	101	587	139.8	467.5
November	96.7	96.9	127	838	967	154	103	594	140.1	466.0
December	96.8	97.3	127	841	975	154	103	604	139.6	462.9

[1] July.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	United States	Canada	Austria	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics (revised)	Dominion Bureau of Statistics (revised)	Federal Statistical Bureau	Ministry of Industry and Labor	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics (revised)	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi (revised)
Base period	1926	1926	January-June, 1914	April, 1914	July, 1914	1913	1926	1913	1913	1913
Commodities	550	502	47	128	69	118	139	45	400	100
Year and month										
1928										
January	96.3	96.9	129	851	982	153	102	607	138.7	463.5
February	96.4	96.8	128	848	985	152	102	609	137.9	461.3
March	96.0	97.7	129	848	978	153	103	623	138.5	463.9
April	97.4	98.3	131	847	984	154	103	624	139.5	464.4
May	98.6	97.7	131	844	987	155	103	632	141.2	464.9
June	97.6	97.1	133	844	986	155	103	626	141.3	461.7
July	98.3	96.2	133	841	979	155	103	624	141.6	453.1
August	98.9	95.4	133	831	996	154	103	617	141.5	456.2
September	100.1	95.5	131	830	986	151	101	620	139.9	457.8
October	97.8	95.4	129	835	971	150	101	617	140.1	463.3
November	96.7	94.9	128	847	957	151	101	626	140.3	465.6
December	96.7	94.5	127	855	955	151	101	624	139.9	464.4
1929										
January	97.2	94.5	128	867	953	151	100	630	138.9	461.2
February	96.7	95.7	130	865	950	159	100	638	139.3	462.7
March	97.5	96.1	133	869	964	154	100	640	139.6	461.1
April	96.8	94.1	134	862	963	150	99	627	137.1	455.0
May	95.8	92.4	135	851	948	148	98	623	135.5	451.6
June	96.4	92.6	134	848	917	146	98	611	135.1	446.6
July	98.0	96.0	132	858	922	149	97	613	137.8	439.7
August	97.7	98.1	132	850	916	150	97	596	138.1	----
September	97.5	97.3	128	----	902	150	96	----	138.1	----

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan, Tokyo	Bureau of Markets, Treasury Department, Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	[2] 48	95	74	160	120	150	92	180	187	56	[3] 117	42
Year and month												
1923	151	232	172	163	181	158.9	170	158	127	199	156.4	181
1924	156	268	183	162	175	166.2	165	165	129	206	153.9	182
1925	155	253	188	161	162	159.1	162	161	128	202	159.4	163
1926	145	198	181	149	145	148.1	161	154	123	179	164.1	149
1927	148	167	172	146	142	141.4	159	146	124	170	170.4	147
1928	149	161	168	148	145	140.3	157	147	121	171	160.7	146
1923												
January	157	223	170	163	.....	157.0	163	.....	131	184	152.7	181
April	156	229	174	168	.....	162.0	167	.....	126	196	157.7	180
July	145	231	170	162	.....	156.5	180	.....	124	192	155.4	178
October	148	235	171	161	.....	158.1	171	.....	125	212	156.1	181
1924												
January	156	251	178	161	.....	165.4	174	.....	131	211	155.8	188
April	154	263	184	161	.....	164.7	166	.....	126	207	153.7	184
July	151	265	182	157	.....	162.6	163	.....	125	195	151.5	184
October	161	273	186	167	.....	170.0	163	.....	133	213	152.8	181
1925												
January	160	279	191	169	.....	171.1	163	166	130	214	159.9	173
February	158	281	192	169	.....	168.9	162	162	.....	210	159.2	173
March	155	279	193	168	.....	166.3	160	162	.....	204	160.3	171
April	151	273	190	163	.....	161.9	158	162	130	202	159.3	165
May	151	262	191	162	.....	158.6	159	162	.....	199	157.8	164
June	153	260	187	161	.....	157.2	162	162	.....	200	157.3	160
July	155	254	188	161	.....	156.9	162	161	127	198	162.8	158
August	155	249	184	159	.....	156.2	162	161	.....	200	160.3	160
September	155	237	185	157	.....	155.1	162	160	.....	201	160.2	157
October	154	223	187	154	.....	153.9	163	162	124	200	159.0	158
November	154	220	186	155	.....	152.7	165	161	.....	198	158.4	160
December	155	220	187	156	.....	152.1	160	160	.....	194	158.1	154
1926												
January	153	214	186	153	153	151.3	161	159	124	192	164.0	151
February	149	211	186	152	147	148.8	160	159	.....	188	163.0	150
March	145	205	183	149	146	144.4	163	157	.....	184	164.4	151
April	143	199	179	150	145	143.6	168	156	120	181	162.8	151
May	143	197	179	151	143	144.9	167	156	.....	177	159.7	150
June	144	194	177	150	143	146.4	163	155	.....	177	155.8	159
July	141	192	178	148	145	148.7	162	156	122	179	156.9	148
August	139	193	180	147	142	149.1	162	154	.....	177	160.5	149
September	140	193	178	146	142	150.9	158	153	.....	176	164.2	147
October	143	198	179	148	144	152.1	154	153	127	174	171.1	146
November	147	199	185	148	142	152.4	155	151	.....	171	174.4	146
December	147	184	186	150	142	146.1	155	153	.....	170	172.0	144

[2] 52 commodities in 1920; 53 commodities from August, 1920, to December, 1921.
[3] 147 items.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan, Tokyo	Bureau of Markets, Treasury Department, Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	48	95	74	160	120	150	92	180	187	56	117	42
Year and month												
1927												
January	145	174	184	146	141	143.6	154	151	128	170	172.8	146
February	146	172	180	146	141	142.6	153	147	.....	171	172.0	148
March	144	167	179	145	141	140.6	150	147	.....	171	174.7	146
April	143	164	177	143	140	139.8	151	147	126	170	173.1	145
May	145	162	172	145	141	141.1	152	145	.....	171	171.3	146
June	149	166	171	146	140	141.8	155	146	.....	172	169.3	147
July	151	165	168	146	140	141.1	161	146	120	170	171.0	147
August	149	167	168	146	142	140.9	165	146	.....	167	170.8	148
September	150	167	169	148	144	142.1	170	146	.....	169	171.8	148
October	150	165	169	147	145	141.4	173	146	122	170	168.7	146
November	151	166	168	148	147	141.1	166	147	.....	168	165.7	144
December	151	166	169	148	146	140.4	162	148	.....	168	163.5	143
1928												
January	153	164	166	148	145	141.1	163	150	123	169	163.1	141
February	150	163	166	147	144	140.3	160	147	.....	169	164.3	142
March	152	164	165	149	145	140.8	160	147	.....	169	163.4	140
April	153	162	166	151	146	142.9	162	147	121	170	163.1	142
May	152	162	164	152	145	143.6	159	148	.....	171	164.5	145
June	153	161	164	151	145	142.6	158	148	.....	169	160.0	149
July	148	162	164	150	144	141.1	157	148	119	169	159.2	147
August	144	162	166	149	144	139.3	154	147	.....	170	157.2	146
September	145	158	168	146	144	137.6	153	148	.....	174	156.2	148
October	146	157	174	145	145	137.9	152	149	120	174	158.8	150
November	148	157	176	145	145	137.9	152	150	.....	173	159.2	149
December	148	157	175	145	144	138.3	154	149	.....	174	159.9	145
1929												
January	146	154	171	144	143	138.3	157	147	120	172	160.1	148
February	146	155	173	145	143	138.4	156	146	.....	171	162.4	150
March	147	155	174	144	142	140.1	157	146	.....	171	164.2	147
April	144	154	174	141	140	138.8	158	146	117	170	161.2	144
May	142	152	171	140	139	135.8	156	147	.....	169	161.7	141
June	141	151	170	139	139	135.6	158	147	.....	168	162.6	143
July	141	152	169	140	143	137.4	159	147	115	166	162.7	145
August	142	154	.....	141	143	135.8	.....	148	.....	165	164.7	146
September	141	154	.....	140	.....	135.8	.....	.....	.....	164	167.1	.....

COST OF LIVING

Standard of Living of Professional Man's Family in 1816-17 as Compared With 1926-27

A COMPARISON of the standard of living of a professional man's family in 1816–17 with that of a similar family 110 years later, i. e., in 1926–27, is given in an article in the Journal of Political Economy for October, 1929.[1]

The head of the 1816–17 family (who is called Mr. Jackson) was a young man holding a responsible position in the office of the secretary of one of the Government departments in Washington, D. C. He received a salary of $1,000 a year, or, in the words of the official record, "$250 a quarter," and "judging from the expenditures, the family had some income in addition to the salary and the money received from the boarder." Men in similar positions in 1926–27 were receiving from $2,700 to $3,100 a year. Mr. Nixon (the name given to the head of the 1926–27 family) was also employed by the Government in a professional capacity at a salary of $3,000 a year, which was supplemented by an annual income of $720 from investments. His family was one of a number of Washington families who were keeping day-by-day records of expenditures for the United States Bureau of Home Economics in 1926–27, and was selected for this comparison because of its remarkable similarity to the Jackson family. The Jackson family had also kept a detailed account of expenditures.

The two families were in much the same position socially, but from an educational standpoint there was a difference. "The young man of 1926 was a Ph. D., and his wife a college graduate. In 1816 it was the husband who was keeping the accounts and apparently guiding the details of the household, whereas in 1926 it was the wife. Before her marriage she had been professionally employed and making a good salary. She still contributed a little to the family income as the opportunity offered."

The size of the two families was practically the same. Mr. Jackson had a wife and daugher, a child about 5 years of age, and a young man boarded in the family. Since in the accounts for each month the entry "wages for Violet" appears, it is assumed that the family had a full-time maid. Mr. Nixon had a wife and two children, a son 3 years old, and an infant daughter 4 months old when the accounts were started in October, 1926. The latter family also had a boarder and a maid.

Table 1, reproduced from the article, shows the expenditures of each family and the percentage each item of expense formed of the total outlay.

[1] The standard of living at the professional level, 1816–17 and 1926–27, by Chase Going Woodhouse.

No attempt was made to reduce the expenditures of the two families to a common base. However, on the basis of indexes developed by R. G. Hurlin and published in The Annalist (New York) for April 11 and July 4, 1921, the author found that "for commodities worth $1 at wholesale in 1914 one would have paid $1.65 in 1816, and $1.48 in 1926. Probably the difference between retail prices at the two dates would be somewhat less."

TABLE 1.—EXPENDITURES OF A PROFESSIONAL FAMILY IN 1816-17 COMPARED WITH THOSE OF A SIMILAR FAMILY IN 1926-27

Item	Nixon, 1926-27		Jackson, 1816-17	
	Amount	Per cent of total expenditures	Amount	Per cent of total expenditures
Food:				
Purchased	$824.89	17.0	$916.35	46.1
Meals out	16.05	.3		
Husband's lunches	73.50	1.5		
Total, food	914.44	18.8	916.35	46.1
Clothing:				
General supplies	3.37	.1	.96	.05
Husband	202.80	4.8	82.65	4.2
Wife	266.98	5.5	[1] 14.37	.7
Son	71.67	1.5		
Daughter	59.49	1.2	[1] 8.06	.4
Total, clothing	604.31	12.5	106.04	5.3
Housing:				
Repairs	1.00	.02	3.68	.2
Taxes on house	290.88	6.0		
6 per cent on equity or rent	960.00	19.8	[2] 187.50	9.4
Total, housing	1,241.88	25.8	191.18	9.6
Operating:				
Fuel	129.45	2.7	80.51	4.1
Light and power	52.64	1.1	13.04	.7
Water	10.60	.2		
Telephone	34.98	.7		
Ice	33.00	.7	.25	.01
Household supplies	25.84	.5	10.78	.5
Laundry	26.60	.5		
Service	373.34	7.7	39.22	2.0
Stationery, postage, etc	15.90	.3	17.67	.9
Car fare	4.80	.1	1.37	.1
Total, operating	707.15	14.6	162.84	8.2
Health:				
General	3.02	.1	6.95	.3
Wife	38.00	.8		
Son	77.53	1.6		
Total, health	118.55	2.4	6.95	.3
Development:				
Reading	47.28	1.1		
Church	4.40	.1		
Charity	1.00	.02	.40	.02
Personal taxes	10.45	.2		
Gifts	71.93	1.5	3.26	.2
Recreation	24.20	.5	11.75	.6
Recreation equipment	36.47	.8		
Vacation trips	102.00	2.1	12.25	.6
Vocation	69.50	1.4	1.50	.1
Associations, not vocational	2.00	.04		
Children's equipment	48.30	1.10	8.56	.4

[1] Items listed under clothing were itemized. Under personal are included all entries of "Mrs. J.," so much. A large part of the total amount so entered must have been spent for clothes for Mrs. Jackson and for Mary.
[2] Rent.

TABLE 1.—EXPENDITURES OF A PROFESSIONAL FAMILY IN 1816–17 COMPARED WTIH THOSE OF A SIMILAR FAMILY IN 1926–27—Continued

Item	Nixon, 1926–27		Jackson, 1816–17	
	Amount	Per cent of total expenditures	Amount	Per cent of total expenditures
Development—Continued.				
Entertaining	$9.55	0.2		
Formal education			$7.25	0.4
Total, development	427.08	8.8	44.97	2.3
Furnishings and equipment	88.08	1.8	367.30	18.5
Personal:				
General	21.03	.4		
Husband	20.80	.4	22.71	1.1
Wife	13.60	.3	[1] 97.84	4.9
Son	1.50	.03		
Daughter	1.48	.03		
Total, personal	58.41	1.2	120.55	6.1
Automobile	166.18	3.4		
Life insurance	292.15	6.0		
Savings	225.60	4.6		
Miscellaneous			[2] 70.47	3.6
Total expenditures	4,853.83	100.0	1,986.65	100.0

[1] Items listed under clothing were itemized. Under personal are included all entries of "Mrs. J.," so much. A large part of the total amount so entered must have been spent for clothes for Mrs. Jackson and for Mary.

[2] Paid on a bill for unidentified items, probably purchased before the account book was started.

It will be noted that the amount spent for food was about the same for both families. However, the food item for the Jackson family represented 46.1 per cent of the total expenditure while for the Nixon family it constituted only 18.8 per cent. The writer comments that "it is well recognized that the percentage of income spent for food is one of the most effective indicators of the level of living. * * * This decrease in the percentage expenditure for food from 46.1 per cent in 1816–17 to 18.8 per cent in 1926–27 is one indication of the rise in the professional level of living between the two dates."

The Nixon accounts showed just how much was spent for clothes and how much for personal items such as toilet services, haircuts, etc., for each member of the family, but in the Jackson records amounts totaling $97.84 were entered simply as "Mrs. J." "It seems likely that much of this was spent for clothing for Mrs. Jackson and Mary [the daughter], though some of it may have gone for personal items." This amount is listed under "Personal" in the table. The expenditures of the men, it is said, are comparable.

The differences in the prices paid for specific articles of clothing are interesting. Mrs. Jackson in 1816–17 bought one pair of shoes for $2.50 and another for $1, while Mrs. Nixon in 1926–27 paid $9.90 for one pair and two other pairs cost together $16.45. Mrs. Jackson paid $1.50 for a pair of "factory hose" but Mrs. Nixon bought silk stockings only, the six pairs bought during the year costing $7.45. The Jackson account listed one pair of shoes for Mary at $1.25; the Nixon boy had two pairs at $3 a pair and one pair of play shoes at $1. Mr. Jackson paid $2 and $3, respectively, for two pairs of shoes, while Mr. Nixon paid $24 for two pairs. The outlay for coats by the two men, however, was almost the same, $31.75 by Mr. Nixon and

$28.75 by Mr. Jackson, the latter having bought the material and had his made. An item of $28 for pressing and cleaning in Mr. Nixon's account had no equivalent in the Jackson list.

There was considerable difference in the operating expenses of the two families not only in the amounts spent but in the items represented, some of those in the Nixon list being either absent from the Jackson list or represented by an entirely different type of article. The telephone, for instance, had no counterpart at the earlier date. Light in 1816–17 meant candles—in 1926–27, electricity, which was used by the Nixons for light and for power for an electrically run washing machine, vacuum cleaner, iron, curling iron, waffle iron, toaster, chafing dish, percolator, sewing machine, and radio charger. Wood was used by the Jacksons for fuel, which the record indicated cost around $3.50 a cord including the cutting, while the Nixons used coal, and gas for cooking and heating water. Ice, which cost the Nixons $33 in 1926–27, appeared only once in the 1816–17 accounts, 25 cents' worth having been bought when a party was being given. The car-fare entry for 1816–17 refers to two occasions upon which a hack was hired.

The Jacksons apparently had a full-time maid; other women were also employed from time to time and the item "washwoman—50 cents" appeared occasionally in their accounts. The total amount spent for service and for laundry (all done at home) was $39.22, or 2 per cent of the income, as compared with the $399.94, or 8.2 per cent of the income, spent by the Nixons for service and laundry. The Jackson's regular maid received $2 a month, or $24 a year, and $15.22 was paid for day help during the year. The Nixons had a maid full time for 39 weeks at rates varying from $7 to $10 a week, the total amount paid being $342. A laundress cost $26, occasional day workers $5.96, and laundry sent out $26.60.

It seems probable that the Jacksons were furnishing their house, since 18.5 per cent of their total expenditures was for furnishings and equipment. The Nixons spent much less in this connection than the Jacksons but they already had a well-furnished house and most of the $88 listed by them under this head went for flowering plants for the house, the only large item for permanent equipment being $16.95 for aluminum cooking utensils.

The Nixons lived in a house having nine rooms and two baths, valued at $16,000 and located in a good section not far out. The plumbing, furnace, electric lights, hardwood floors, and the many built-in conveniences were, of course, all lacking in the house rented by the Jackson family in 1816–17, which, however, "judging by the furniture bought, must have been a good house of some pretensions." The Jacksons spent only 9.6 per cent of their income for housing as compared with the 25.8 per cent spent by the Nixons, who were paying more for housing both absolutely and in relation to other items in the budget than the Jacksons but were getting much more in the way of comfort, sanitation, and convenience. "The increase in the standard of living as regards housing is too obvious for comment; while the great increase in land values accounts for part of the increase in housing expenditures, it is far from accounting for all."

The theater constituted the chief recreation of both families. The $36.47 spent by the Nixons for recreation equipment covered chiefly

expenditures in connection with their radio, plus a few dollars for films and the developing of films. Neither family spent much for church or charity, but a memorandum indicated that Mr. Jackson had agreed to pay $30 for a pew in a church.

The amount spent for health in 1816–17 included two items for a doctor, one at $1 and one at $3.50, the balance going for medicine, mostly patent. Dental work and routine examinations by child specialists, which did not figure in the Jackson expenditures, accounted for the greater part of the $118.55 spent by the Nixons under this head in 1926–27. There was no serious illness in the latter family but the little boy required medical attention, and though they did not spend needlessly they felt that "health is an important item to be cared for regularly."

The expenditures by the two families for food are listed in detail in Table 2, reproduced from the article.

TABLE 2.—FOOD EXPENDITURES OF A PROFESSIONAL FAMILY IN 1816–17 AND OF A SIMILAR FAMILY IN 1926–27

Item	Nixon, 1926–27			Jackson, 1816–17		
	Amount	Per cent of total food expenditure	Per cent of subtotal	Amount	Per cent of total food expenditure	Per cent of subtotal
Milk	$184.48	20.2		$24.70	2.7	
Cream	1.77	.2				
Ice cream	18.73	2.0		3.75	.4	
Butter	63.11	6.9		77.49	8.4	
Eggs	46.02	4.6		43.79	4.8	
Cheese	1.60	.2		.56	.1	
All meat	99.91	10.9	100.0	249.94	27.3	100.0
Beef	47.86	5.2	47.9	85.30	9.3	34.1
Dried beef	1.85	.2	1.8			
Pork	14.35	1.6	14.4	15.22	1.7	6.1
Sausage				4.18	.4	1.7
Ham	14.63	1.6	14.6			
Bacon	10.31	1.1	10.3	69.29	7.6	27.7
Veal	1.95	.2	2.0	36.48	4.0	14.6
Lamb	7.51	.8	7.5	29.40	3.2	11.8
Mutton				10.07	1.1	4.0
Other meat	1.45	.2	1.5			
Poultry	50.15	5.6		59.70	6.5	
Fish	11.68	1.3		12.42	1.35	
Oysters				11.08	1.2	
Lard	.50	.1		6.38	.7	
Lard substitutes	10.66	1.2				
Oils	4.79	.5				
All cereals	48.22	5.5	100.0	149.53	16.3	100.0
White flour	.73	.2	3.6	103.67	11.3	69.3
Other flour	3.27	.4	6.8	1.56	.2	1.1
Oatmeal	.35	.03	.7			
Breakfast foods	7.03	.8	14.6			
Rice	1.72	.2	3.6	.80	.1	.5
Hominy				3.78	.4	2.5
Corn meal	.43	.04	.9	11.91	1.3	8.0
Tapioca	.37	.04	.7			
Macaroni	.55	.1	1.1			
Cornstarch	1.00	.2	2.1			
Crackers	5.68	.6	11.8	2.75	.3	1.9
Cookies and cakes	6.32	.7	13.1	14.71	1.6	9.8
Bread	19.77	2.2	41.0	10.35	1.1	6.9
All sweets	40.59	4.4		61.03	6.7	
Sugar	25.45	2.7		57.91	6.3	
Sirup and molasses	1.06	.1		2.38	.3	
Honey	1.60	.2				
Jams, jellies, etc	12.48	1.4		.75	.1	

TABLE 2.—FOOD EXPENDITURES OF A PROFESSIONAL FAMILY IN 1816-17 AND OF A SIMILAR FAMILY IN 1926-27—Continued

Item	Nixon, 1926-27			Jackson, 1816-17		
	Amount	Per cent of total food expenditure	Per cent of subtotal	Amount	Per cent of total food expenditure	Per cent of subtotal
All potatoes	$24.76	2.7	100.0	$19.68	2.2	100.0
Irish potatoes	20.08	2.2	81.1	14.94	1.6	75.9
Sweet potatoes	3.78	.4	15.3	4.74	.5	24.1
Potato chips	.90	.1	3.6			
All vegetables	91.44	10.1	100.0	38.99	4.4	100.0
Root:						
Carrots	5.37	.6	5.9	2.59	.3	6.6
Turnips	1.00	.2	1.1	2.48	.3	6.4
Parsnips	.15		.2	1.00	.1	2.6
Beets	.70	.1	.8	1.78	.2	4.6
Green onions	.19		.2			
Dry onions	2.54	.3	2.8	1.58	.2	4.1
Legumes:						
Lima beans	.65	.1	.7			
Dried beans	.24		.3			
Fresh peas	3.84	.4	4.2	3.62	.4	9.3
Corn	3.03	.3	3.3	.65	.1	1.6
Leafy:						
Cabbage	1.98	.2	2.2	5.91	.6	15.2
Lettuce	13.28	1.5	14.5			
Spinach	6.99	.8	7.6	2.51	.3	6.4
Greens				1.56	.2	4.0
Cauliflower	2.25	.2	2.5			
Celery	3.12	.34	3.4	.31		.8
Other:						
Tomatoes	10.91	1.2	11.9	2.55	.3	6.5
Asparagus	.65	.1	.7	2.66	.3	6.8
Cucumbers and radishes	.68	.1	.7	2.50	.3	6.4
String beans	9.83	1.1	10.7	4.45	.5	11.4
Squash	1.05	.2	1.1	2.86	.3	7.3
Pumpkin	.45		.5			
Peppers	.38		.4			
Other vegetables	.80	.1	.9			
Canned vegetables	21.36	2.3	23.4			
All fruit	96.20	10.5	100.0	23.22	2.6	100.0
Apples	12.42	1.4	12.9	5.31	.6	22.9
Bananas	3.22	.4	3.3			
Berries	15.50	1.7	16.1	6.91	.8	29.7
Cherries	5.25	.6	5.6	1.32	.1	5.7
Grapefruit	1.80	.2	1.9			
Grapes	2.18	.2	2.3	3.00	.3	12.9
Lemons	.33		.3	2.50	.3	10.8
Oranges	22.16	2.4	23.0			
Peaches	5.85	.6	6.1	2.23	.2	9.6
Pears	.25		.2			
Pineapple	.30		.3			
Plums				1.44	.2	6.2
Watermelon	1.80	.2	1.9			
Other fruit	1.55	.2	1.6	.51	.1	2.2
Canned fruit	23.59	2.6	24.5			
Dates	1.20	.1				
Dried apples				.63	.1	
Figs				1.58	.2	
Prunes	1.63	.2				
Currants				.50		
Raisins	.56	.1		10.19	1.1	
Miscellaneous foods:						
Soup	.59	.1				
Chocolate and cocoa	2.32	.3				
Nuts	7.31	.8		7.15	.8	
Gelatin	.79	.1				
Coffee	4.51	.5		18.00	2.0	
Tea	.25			12.27	1.3	
Spices	.35			3.70	.4	
Pickles	.45			.63	.1	
Vinegar	.83	.1		1.44	.1	
Salt	.48	.1		2.29	.2	
Extracts	1.71	.2				
Popcorn	.60	.1				
Alcoholic beverages				75.25	8.2	
Soda, etc	6.70	.5		.50		
Meals out	89.55	9.8				
Total, food	914.44	100.0		916.40	100.0	

Noticeable differences in food consumption habits are indicated by the food expenditures. Fruit and vegetables, for instance, figured more largely in the diet of the Nixon family in 1926–27 than in that of the Jackson family. Of the total outlay for food, the Nixons spent 10.5 per cent for fruit and 10.1 per cent for vegetables, as compared with 2.6 and 4.4 per cent, respectively, spent by the Jacksons. The Jacksons spent 27.3 per cent of the total for meat and the Nixons only 10.9 per cent. Only a few unit meat prices were listed in the 1816–17 record, but it showed that 61 pounds of pork were bought for $6.10; 10 pounds of pork shoulder for $2, and a steak for 50 cents. In 1926–27 the Nixons paid 97 cents for 5 pounds of pork shoulder, almost the same unit price as in 1816–17, and "steaks ranged from 43 to 75 cents," although it is pointed out that "quality can not even be guessed at in making the comparison of steak prices." Eight turkeys were bought by the Jacksons in 1816–17 for $1 to $1.50 each, and a goose cost from 75 cents to $1. In 1926–27 the Nixons paid $5.73 for one turkey and $3.75 for a goose. A pair of fowls was entered in the 1816–17 account at 75 cents while in 1926–27 one cost from $1.25 to $1.70. Cereals formed 16.3 per cent of the total food expenditure in 1816–17 but only 5.5 per cent in 1926–27. White flour was the main cereal item bought in 1816–17 and represented 69.3 per cent of the amount spent for all cereals, whereas in 1926–27 it accounted for only 3.6 per cent.

Certain articles were considerably higher in price at the earlier date. Sugar was 16⅔ cents a pound; in 1926–27 it could be bought for 6 to 7 cents. Raisins in 1816–17 were 37½ cents a pound. Ice cream cost the Jacksons 75 cents a pint and was purchased only once, apparently for the party given, when they had 5 pints. The Nixons spent $18.73 for ice cream, at 20 cents a pint.

The main factors responsible for the changes in living standards between the two periods are mentioned by the writer in the following paragraphs quoted from his article:

> On the whole, then, while these two families had total food budgets of almost the same amount, a comparison of the kinds of food consumed shows the advance in scientific knowledge of diet and the improvement in transportation and marketing facilities during the last century.
>
> While, of course, the various factors making for social change can not be entirely separated one from the other, still the expenditures for prepared breakfast foods, canned fruit and vegetables, and laundry sent out reflect chiefly the development of factory production. Advances in pure science and in engineering skill are mainly responsible for the expenditures for more comfortable, sanitary, and labor-saving housing, for running water, for furnace heat, for gas for cooking and for heating hot water, for electricity for light and power, for telephone, for recreational equipment, for automobile, and for a better diet. Increased knowledge of medicine, of dentistry, and of child development explain the expenditures for health and for children's equipment. Newer business methods which provide household and toilet supplies in convenient and attractive packages, popularize beauty parlors, advertise ready-made clothing and style changes, and sell insurance account for still other items on the list.

Inquiry into Comparative Cost of Living in Europe and the United States

THE Governing Body of the International Labor Office, which began its forty-sixth session at Geneva on October 4, 1929, had under discussion an inquiry into the standard of living in Europe as compared with that prevailing in the United States. According to the correspondent of the Manchester Guardian (issue of October 7, 1929), the International Labor Office had undertaken to make such a study at the request of Mr. Henry Ford, who wished to fix the wages of workers in the European factories of his company at a level which should provide a standard of living equivalent to that of his workers in Detroit. The costs of the inquiry were to be borne by Mr. E. A. Filene, who offered £5,000 for that purpose. The labor office had decided to undertake the study in June, when the offer was first made, but notwithstanding at the October meeting various employers protested against it. One group was afraid that this might cloak a design to effect a general increase in European wages in order to kill off European competition, while another feared that American manufacturers had a plan on foot to establish European branches which, subsidized by the parent companies, might pay high wages and sell at low prices, thus practicing "dumping" on the European market. The Governing Body, however, was not convinced by these arguments that the inquiry should be given up.

M. Jouhaux and Director Thomas pointed out the importance of obtaining reliable figures as to the real comparative value of American and European wages. The International Labor Office, they urged, had the duty of revealing the truth as to labor conditions regardless of possible disagreeable results, which, in any event, were ultimately beyond the power of the labor office to prevent.

Income and Expenditure of a Laborer's Family in Buenos Aires in 1928

THE National Department of Labor of Argentina recently completed a survey in Buenos Aires to ascertain the average income and expenditure of a laborer's family during the year 1928, the results of which appeared in the March, 1929, issue of Crónica Mensual, of Buenos Aires (pp. 2695–2700). The data were obtained from a study of 1,198 families, including 4,766 persons.

The report states that the average earnings of the workman's familyin 1928 were 2,043.63 paper pesos ($867.73)[2] as against 1,995.17 pesos ($808.44) in 1926, while the average annual expenditure per family in 1928 was 2,035.87 pesos ($864.43), as against 1,923.44 pesos ($779.38) in 1926.

Of the 1,198 families investigated, 975 had balanced budgets, 119 had a surplus of 516 pesos ($219.09) for the year, and 104 reported an average deficit of 501 pesos ($212.72).

The following table shows the average income and expenditure of the 1,198 laborers' families in Buenos Aires in 1928, by means of support.

[2] All amounts are given in paper pesos, which are worth 44 per cent of the gold pesos, the average exchange rate of which was 96.5 cents in 1928 and 92.1 cents in 1926.

AVERAGE ANNUAL INCOME AND EXPENDITURE FOR 1,198 FAMILIES IN BUENOS AIRES, BY MEANS OF SUPPORT

[Paper peso is valued at 44 per cent of gold peso, the average exchange rate of which was 96.5 cents in 1928]

Families supported by—	Number of families	Average annual income		Average annual expenditure	
		Pesos (paper)	U. S. currency	Pesos (paper)	U. S. currency
Father	492	1,796.30	$762.71	1,818.15	$771.99
Mother	43	976.04	414.43	1,167.91	495.89
Parents	151	2,048.86	869.95	1,994.46	846.85
Parents and 1 or more children	48	3,172.81	1,347.18	3,042.06	1,291.66
Father and 1 or more children	217	2,819.37	1,197.10	2,770.81	1,176.49
Mother and 1 or more children	91	2,278.75	967.56	2,211.79	939.13
1 or more children	88	1,898.59	806.14	1,958.45	831.56
1 or more brothers	2	1,560.00	662.38	1,560.00	662.38
Uncle and niece	1	1,440.00	611.42	1,440.00	611.42
Son-in-law	1	2,424.00	1,029.23	1,500.00	636.90
Husband	17	1,514.82	643.19	1,420.94	603.33
Wife	47	895.11	380.06	892.47	378.94
Total and average	1,198	2,043.63	867.73	2,035.87	864.43

IMMIGRATION AND EMIGRATION

Statistics of Immigration for September, 1929

By J. J. Kunna, Chief Statistician United States Bureau of Immigration

THE statistics for September, 1929, show a total of 56,537 aliens admitted to the United States, the largest number for any one month since September, 1927, when 56,619 aliens entered the country. The admissions in September last, classified according to last or intended period of residence in this country, included 28,020 immigrants and 28,517 nonimmigrants. Aliens of the latter class outnumbered the total for any month since before the World War, this being due to a large number of home-coming aliens who returned from a visit to their native lands. In September last, 19,158 aliens came in under the immigration act of 1924 as returning residents, of which number 16,721 were of European birth, 3,207 being natives of Germany, 2,102 of England, 1,933 of Scotland, 1,421 of Italy, 1,250 of the Irish Free State, 1,112 of Sweden, 993 of France, and 590 of Poland. Of the remainder, the largest number came from Japan, 688 returning residents being natives of that country.

During the three months from July to September, 1929, a total of 70,866 immigrants were admitted from all countries, compared with 74,628 for the corresponding period of the previous year, a decrease of 3,762, or 5 per cent. Immigration from certain sources, however, shows an increase, particularly from Canada and Great Britain, the number of immigrants coming from these respective countries jumping from 18,876 to 22,380 and from 4,655 to 6,650. An increased number of immigrants also came from the Irish Free State and from Italy. The countries showing the largest decreases were Mexico and Germany, the number from these countries dropping from 15,379 to 5,181 and from 8,319 to 6,717, respectively. The Scandinavian countries also contributed a less number of immigrants during the said three months of 1929 than during the same period of the previous year.

Less than 4 out of 5 of the aliens admitted from foreign contiguous territory come to the United States for the first time. In the three months from July 1 to September 30, 1929, a total of 20,777 immigrants entered via the northern border and 4,958 via the southern border, of whom 5,572 had previously resided in this country. In other words, out of every 100 aliens admitted as immigrants at points along the international land boundaries, about 21 were former residents of the United States who emigrated to Canada or Mexico where they resided for a period longer than one year and now return again to make their home on this side of the border. Over one-third of the Mexican immigrants admitted during certain months of the year are of the class who had previously resided in the United States for extended periods.

A comparison of the number of quota immigrants admitted during the first quarter of the past fiscal year—July to September, 1928—and during the same period of the current fiscal year shows an increase

in the total from 31,540 to 33,071. The largest increase was in the case of Great Britain and Northern Ireland, the number jumping from 7,134 to 10,573, all having been born overseas but many coming to this country from Canada, their last permanent residence. The largest decrease recorded was for Germany, the number of quota immigrants coming from that country dropping from 8,666 to 6,864, while the decline from the Scandinavian countries was 1,425 or from 3,558 to 2,133. In the annual quotas allotted for this fiscal year under the national origin plan, Great Britain and Northern Ireland, Italy, and the Netherlands, are the chief gainers, and Germany and the Irish Free State are the principal losers.

During the month of September, 1,205 aliens were deported under warrant proceedings, making a total of 3,877 for the three months of the current fiscal year, an increase of 1,008, or 35.1 per cent, over the total for the same months a year ago. During the last three months 196 aliens convicted of crimes involving moral turpitude and sentenced to imprisonment for a term of one year or more were deported following their release from prison. The largest number of these criminals were Mexicans, 58 being of this race, the others being principally English, French, German, Irish, and Italian. In addition to the above the deportees for the last three months included 209 who were criminals at the time of entry. Here also Mexicans were the largest group, comprising 111, the remainder being scattered among miscellaneous races. A number of these criminals at time of entry had been previously deported and all were subject to deportation when they last entered the country. The crimes recorded as having been committed by these 405 criminals after or before entry include larceny, 188; robbery, 119; adultery, 51; forgery and perjury, 13; assault and battery, 9; murder, manslaughter, or attempt to kill, 7; peddling narcotics, 6; rape, 3; perverts and others, 9. The total deportees for the same three months also include 161 procurers and other immoral classes, 256 who were afflicted with insanity or other mental or physical defects, 1,493 who entered the country without proper visa, 492 "visitors" who had overstayed their leave—remained here longer than permitted—and 1,070 who were returned to foreign countries for miscellaneous causes. Over one-half of these deportees were sent to Mexico, 1,962 being aliens of the Mexican race.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1 TO SEPTEMBER 30, 1929

Period	Inward					Aliens debarred from entering [1]	Outward					Aliens deported after landing [2]
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens departed	Total	
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
July, 1929	20,068	15,749	35,817	37,636	73,453	847	5,086	23,084	28,170	56,339	84,509	1,261
August, 1929	22,778	19,007	41,785	70,783	112,568	802	5,571	23,723	29,294	70,551	99,845	1,411
September, 1929	28,020	28,517	56,537	85,946	142,483	719	5,150	21,398	26,548	49,429	75,977	1,205
Total	70,866	63,273	134,139	194,365	328,504	2,368	15,807	68,205	84,012	176,319	260,331	3,877

[1] These aliens are not included among arrivals, as they were not permitted to enter the United States.
[2] These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

PUBLICATIONS RELATING TO LABOR

Official—United States

MASSACHUSETTS.—Department of Industrial Accidents. *Annual report for the year ending June 30, 1928. Boston, 1929. 89 pp.; charts. (Public document No. 105.)*

Reviewed in this issue.

—— Department of Labor and Industries. *Annual report for the year ending November 30, 1928. Boston, 1929. 106 pp. (Public document No. 104.)*

Includes the reports of five subordinate agencies, namely, the division of industrial safety, the board of conciliation and arbitration, the minimum wage commission, the division of standards, and the division of statistics. Data on occupational diseases, taken from the report of the division of industrial safety, and on the experience of the department under the weekly wage-payment law are given in this issue.

—— —— *Annual report on the statistics of labor for the year ending November 30, 1929 [1928?]. Part I—Twenty-eighth annual directory of labor organizations in Massachusetts, 1929. (Labor bulletin No. 157.) [Boston], 1929. 79 pp. (Public document No. 15.)*

Covers national and international organizations, State and district councils, central labor unions, local councils, and local trade-unions.

OHIO.—Department of Public Welfare. Division of Charities. *The care of the aged and infirm of Ohio. Columbus, 1929. 66 pp., illus. (Published as Vol. VI, No. 1, of Ohio Welfare Bulletin, July, 1929.)*

Contains "suggested minimum standards for homes for aged and infirm" in the matter of rules, food, social service, quarters, sanitation, clothing, occupation, recreation and social life, religious services, etc. Also gives a directory of homes and a reproduction of the text of the State laws relating to such homes.

Data gathered concerning the county homes of the State show that of the 7,138 inmates 4,372, or 61.2 per cent, are 65 years of age or over.

UNITED STATES.—Department of Commerce. Bureau of Foreign and Domestic Commerce. *Domestic commerce series No. 27: Prison industries. Washington, 1929. 132 pp.*

Discusses what is being done in the various State penitentiaries to provide productive occupations for convicts. The problem is discussed from five angles—penological, administrative, political, industrial, and sociological.

—— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 490: Statistics of industrial accidents in the United States to the end of 1927. Washington, 1929. 187 pp., charts.*

Summary figures from this report were published in the Labor Review for March, 1929 (p. 87).

—— —— —— *Bulletin No. 491: Handbook of labor statistics, 1929 edition. Washington, 1929. 914 pp.; charts.*

—— —— —— *Bulletin No. 493: Wholesale prices, 1913 to 1928. Washington, 1929. 257 pp.; charts.*

—— —— —— *Bulletin No. 495: Retail prices, 1890 to 1928. Washington, 1929. 219 pp.; charts.*

—— —— —— *Bulletin No. 499: History of wages in the United States from colonial times to 1928. Washington, 1929. 527 pp.*

Reviewed in this issue. Certain data from this report were also given in the January, 1929, issue of the Labor Review (pp. 8–13).

UNITED STATES.—Department of Labor. Bureau of Labor Statistics. *Bulletin No. 501: Proceedings of the sixteenth annual meeting of the International Association of Public Employment Services, held at Cleveland, Ohio, September 18–21, 1928. Washington, 1929. 177 pp.*

—— —— Children's Bureau. *Publication No. 192: Child labor in New Jersey. Part I.—Employment of school children, by Nettie P. McGill and Mary Skinner. Washington, 1929. 140 pp.*

Based upon a study of 6,265 children under 16 years of age in Newark and 2,126 in Paterson, attending school in 1925–26, who, between June, 1924, and March, 1925, had done work outside of their homes for at least 26 days. In Newark 2,434 of the children reported street work and 4,468 other kinds; in Paterson the corresponding figures were, respectively, 596 and 1,713. In both cases these figures included duplications, some children having been employed both in street trades and in other kinds of work. Full data are given concerning the age and sex of the children, nationality of fathers, kinds of work done, extent and regularity of work, hours worked, earnings, progress of the worker in school, and the economic status of the families concerned. For each city these data are given separately for each of the main groups of street workers.

—— —— Women's Bureau. *Bulletin No. 66: History of labor legislation for women in three States, by Clara M. Beyer, and Chronological development of labor legislation for women in the United States, by Florence P. Smith. Washington, 1929. 288 pp.*

The three States selected for treatment in the first part are Massachusetts, the pioneer State in enacting effective hours legislation for women; New York, which began its factory legislation for women in 1886; and California, which passed in 1889 its first special legislation for the benefit of working women, a law requiring the provision of suitable seats for women employed in manufacturing, mechanical, or mercantile establishments, with permission to use them. For each State an account is given of how the legislation originated, the attempts which preceded its success, and the various factors which combined to secure its passage.

The second part gives in summarized form a digest of all the laws of the kind, past or present, in all the States, "from the first hour law in the country, enacted in 1847 in New Hampshire and applying to both sexes, to the 48-hour law for women in New York, that went into effect January 1, 1928, and the legislation enacted in that year." It contains also a summary of current laws for women as of January 1, 1929.

—— Department of State. *No. 926, General instruction consular (Diplomatic serial No. 273): Admission of aliens into the United States. Washington, 1929. 203 pp.*

Deals with such matters as passport visas, immigration visas, determination of nationality, exclusion, quota control, and the documentation of seamen.

—— Federal Board for Vocational Education. *Bulletin No. 137 (Trade and industrial series No. 38): Granite cutting—an analysis of the granite cutter's trade, together with specimen instruction material for use of apprentices and journeymen workers. Washington, 1929. 249 pp; diagrams, illus.*

In the preparation of this bulletin the Federal board had the cooperation of the secretary of the apprentice commission of the granite industry, Boston, Mass., four national associations representing producers and dealers in that industry, and the Granite Cutters' International Association.

—— Treasury Department. Public Health Service. *Public health bulletin No. 187: The health of workers in dusty trades. II.—Exposure to siliceous dust (granite industry). Washington, 1929. 206 pp.; diagrams, illus.*

Reviewed in this issue.

Official—Foreign Countries

AUSTRALIA.—Department of Health. Division of Industrial Hygiene. *Service publication No. 7: An investigation into the health of employees in gas-making plants, by Frank R. Kerr. Melbourne, [1928]. 88 pp.*

The study showed that while there might be a certain risk of acute carbon-monoxide poisoning in gas-making plants there was no evidence to prove that chronic poisoning occurred in the plants studied, and the average degree of carbon-monoxide absorption was not enough to cause specific symptoms nor serious aftereffects.

—— (QUEENSLAND). Registrar of Friendly Societies, Building Societies, and Industrial and Provident Societies. *Forty-fourth report, containing a general review of friendly societies in Queensland, lists of societies to March 31, 1929, and financial and numerical statements for the year ended June 30, 1928. Brisbane, 1929. 30 pp.*

CANADA.—Department of Labor. *Eighth report on organization in industry, commerce, and the professions in Canada, 1929. Ottawa, 1929. 131 pp.*

—— Department of Trade and Commerce. Bureau of Statistics. *Sixth census of Canada, 1921. Volume IV.—Occupations. Ottawa, 1929. cxlvii, 837 pp.*

In both French and English.

—— (ALBERTA).—Bureau of Labor. *Annual report for the fiscal year 1928–29. Edmonton, 1929. 23 pp; charts.*

Contains data on classified weekly wage rates for male and female employees of 2,274 firms, average numbers employed, hours of labor, weeks of operation during year, factory inspections, minimum wage, placement, etc.

DENMARK.—Invalideforsikringsraadet. *Beretning for aaret 1928. Copenhagen, 1929. 158 pp.; charts. (Særtryk af Socialt Tidsskrift, September, 1929.)*

Contains a report on invalid and old-age pensions in Denmark during 1928.

—— Statistiske Departement. *Statistisk aarbog, 1929. Copenhagen, 1929. 260 pp.*

Contains statistical information in regard to the economic and social conditions in Denmark during 1929, including wages, unemployment, working hours, insurance, and other labor conditions.

GERMANY.—Reichsarbeitsministerium. *Jahresberichte der gewerblichen Berufsgenossenschaften über Unfallverhütung für 1928. Berlin, [1929?]. 625 pp., illus. (48 Sonderheft zum Reichsarbeitsblatt.)*

Contains a review of the measures undertaken for prevention of industrial accidents in various industries and occupations in Germany during 1928.

—— —— *Das Übereinkommen von Washington über den Achtstundentag, 1919–1929. Berlin, 1929. 244 pp. (50 Sonderheft zum Reichsarbeitsblatt.)*

Contains a review of the Washington Draft Convention limiting the hours of work in industrial undertakings to 8 in the day and 48 in the week, and results of the application of this draft convention in various countries.

GREAT BRITAIN.—Industrial Health Research Board. *Report No. 55: A study of personal qualities in accident proneness and proficiency, by Eric Farmer and E. G. Chambers. London, 1929. 80 pp.; charts.*

—— Mines Department. Safety in Mines Research Board. *List of published papers relating to research into sources of danger in coal mines. London, 1929. 10 pp.*

The list of reports is classified according to subject.

—— —— —— *Paper No. 53: The ignition of fire damp, by H. F. Coward and R. V. Wheeler. (A revision of S. M. R. B. Paper No. 8 of 1925.) London, 1929. 40 pp.; charts.*

This study covers the conditions under which fire damp will ignite and the mixtures of fire damp and air which are most inflammable.

GREAT BRITAIN.—Mines Department. Safety in Mines Research Board. *Paper No. 54: The ignition of fire damp by the heat of the impact of metal against rock, by M. J. Burgess and R. V. Wheeler. London, 1929. 25 pp., illus.*

Covers the researches carried out on the ignition of fire damp by sparks from picks.

—— —— —— *Seventh annual report, 1928. London, 1929. 88 pp.; charts, illus.*

The report gives an account of the various researches being carried on by the board or by other organizations in collaboration with it. These studies include problems relating to coal-dust and fire-damp explosions, the spontaneous combustion of coal, the safe use of electricity and explosives, and other conditions affecting the safety of employees. There is also an account of the studies of the special committee dealing with health problems.

—— Registry of Friendly Societies. *Report for the year 1928. Part 4: Trade-unions. Section I—Proceedings and statistical notes. London, 1929. 20 pp.*

The statistical data relate to the year ending December 31, 1927. During this year the unions showed some recovery from the effects of the great strike. Although the membership was reduced by nearly 250,000, the income from members was increased by £340,000. "Expenditure on unemployment benefit (£3,131,000) was less than half the amount for 1926, and dispute pay (£187,000) was exceptionally small. As a result, the funds of registered unions increased during the year from £8,650,456 to £9,898,625."

—— —— *Report for the year 1929. Part 5: Building societies. Section II.—Directory and summaries. London, 1929. 77 pp.*

INDIA (BOMBAY).—Labor Office. Secretariat. *Report of an enquiry into deductions from wages or payments in respect of fines. Bombay, 1928. 94 pp.*

—— Strike Enquiry Committee, 1928–29. *Report, Vol. I. Bombay, 1929. 260 pp.*

—— (BURMA).—[Chief Inspector of Factories.] *Annual report on the working of the Indian factories act, 1911, in Burma for the year 1928. Rangoon, 1929. 60 pp.*

INTERNATIONAL LABOR OFFICE.—*The regulation of hours of work on board ship. Supplementary report. (Item 1 on agenda of International Labor Conference, thirteenth session, Geneva, 1929; first discussion.) Geneva, 1929. 19 pp.*

—— *Studies and reports, series P (seamen), No. 3: Hours of work on board ship—collection of laws, regulations, and collective agreements. Geneva, 1929. 280 pp.*

IRISH FREE STATE.—Committee on the Relief of Unemployment, 1927. *Final report. Dublin, 1928. 27 pp.*

Data from this report are given in this issue.

—— —— *First interim report. Dublin [1928?]. 5 pp.*

JAPAN.—Department of Education. *Fifty-second annual report (1924–25). Tokio, 1929. 488 pp.; charts. (Abridged.)*

Among the subjects treated in this volume are technical schools and adult education.

LEAGUE OF NATIONS.—Economic and Financial Section. *International statistical year-book, 1928. Geneva, 1929. 233 pp.*

Contains statistical information in regard to economic and financial matters in various countries, including cost of living, wholesale and retail prices, unemployment, etc.

NETHERLANDS.—Centraal Bureau voor de Statistiek. *Jaarverslag over het jaar 1928. The Hague, 1929. 34 pp.*

Report on the activities and works of the Central Statistical Bureau during 1928.

—— Centrale Commissie voor de Statistiek. *Jaarverslag over het jaar 1928. The Hague, 1929. 62 pp.*

Report on the activities and work of the Central Statistical Commission during 1928.

—— (AMSTERDAM).—Arbeidsbeurs. *Verslag over het jaar 1928. Amsterdam, [1929]. 80 pp.; charts. (Verslagen der bedrijven diensten en commissiën der gemeente Amsterdam, No. 2.)*

A report on the activities of employment offices in the city of Amsterdam in 1928.

NEW ZEALAND.—Department of Labor. *Report, 1928–29. Wellington, 1929. 35 pp.*

The unemployment situation is described as still serious, the number of applicants enrolled at the department's employment bureaus having reached 3,896 in July, 1929, equivalent to 1 in each 373 of the population, but this proportion is lower than prevails in Great Britain, Australia, or the United States. About two-thirds of the applicants are unskilled workers. During the year 1928–29 the department placed a total of 17,271 of whom 7,903 were employed either in the public works department or on other Government works.

NORWAY.—Statistiske Centralbyrå. *Arbeidslønnen i jordbruket, driftsåret 1928–1929. Oslo, 1929. 15 pp. (Norges offisielle statistikk, VIII, 92.)*

A report on wages of agricultural workers in 1928–29.

SOVIET UNION.—Gosplan. *Kontrol'nye tsifry narodnogo khoziaistva SSSR na 1928/9 god. Moscow, 1929. 702 pp.*

Gives statistical information in regard to economic and social affairs in the Soviet Union for 1928–29, including labor conditions.

—— Tsentral'noe Statisticheskoe Upravlenie. *Communications presentées à la XVIII session de l'Institut International de Statistique. Moscow, 1929. [Various paging.]*

Papers on statistical methods presented to the 18th session of the International Statistical Institute, held at Warsaw, Poland, in August, 1929, as follows: Methods of statistics on power machinery; statistics of the country of the Soviets; statistics of agriculture of the Soviet Union; classification of occupations in agriculture; methods of compiling budgets of wage earners.

—— (UKRAINE).—Tsentral'na Statistichna Uprava. *Kommanal'na statistika, tom IV, vip 2: Kommunal'ne Gospodarstvo Mis'kikh Selishch U S R R (U S S R). Kharkof, 1929. 78 pp.*

Contains statistical information in regard to municipal economy in Ukraine in 1926–27, including housing, wages of workers, etc.

—— —— *Sil'skogospodars'ka statistika, tom III, vip 15: Pidsumki Vesnianogo Obsliduvannia Sil's'kogo Gospodarstva Ukraini v. 1928 r. Kharkof, 1929. 183 pp.*

Report on an investigation of farming (agriculture) in Ukraine in the spring of 1928, including employment of labor.

—— —— *Statistika Ukraini, tom II, vip 6: Tsenzova Promislovist' Ukraini, 1925–26. Kharkof, 1929. 184 pp.*

Contains statistical information in regard to large-scale industries in Ukraine, including number of wage earners employed, hours worked, and wages.

SPAIN.—Ministerio de Trabajo y Prevision. Servicio General de Estadística. *Anuario estadistico de España, 1927. Año XIII. Madrid, 1929. xlii, 671 pp.; maps, charts.*

The volume contains, in addition to statistical data relating to population, production, agriculture, commerce, etc., tables showing index numbers of retail and wholesale food prices, and data concerning strikes in Spain.

STRAITS SETTLEMENTS.—Labor Department. *Annual report for the year 1928. Singapore, 1929. 31 pp.*

SWEDEN.—[Socialdepartementet.] Riksförsäkringsanstalten. *Olycksfall i arbete, år 1926. Stockholm, 1929. 52 pp.*

Contains statistics in regard to number, causes, frequency, severity, and location of industrial accidents in Sweden in 1926, some of which are given in this issue of the Labor Review.

—— —— Statistiska Centralbyrån. *Statistisk årsbok för Sverige, sextonde årgången, 1929. Stockholm, 1929. 399 pp.*

Contains data on immigration and emigration, social insurance, prices, cost of living, consumers' cooperation, housing, public employment offices, unemployment, strikes, collective agreements, wages, and hours of labor. The statistical tables are in French as well as Swedish.

UNION OF SOUTH AFRICA.—Office of Census and Statistics. *Special report series No. 60: Detailed occupations of Europeans in the principal towns and their suburbs, census 1926. Pretoria, 1929. 25 pp. (Mimeographed.)*

Unofficial

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *The Annals, Vol. CXLV, Part II: India, edited by D. R. Bhandarkar. Philadelphia, September, 1929. 203 pp.*

A collection of articles relating to India, classified under the following heads: Government and politics; economic problems; education and journalism; and social problems. The topics include emigration, unemployment, famines and standards of living, and technical and vocational education.

AMERICAN FEDERATION OF LABOR. Executive Council. *Report to the forty-ninth annual convention, Toronto, Ontario, October 7, 1929. Washington, 1929. 94 pp.*

Some of the data from this report are given in the report of the proceedings of the convention of the American Federation of Labor, in this issue.

AMERICAN MANAGEMENT ASSOCIATION. *General management series, No. 86: The employment and adjustment of the older worker, by C. R. Dooley and Helen L. Washburn. New York, 20 Vesey Street, 1929. 42 pp.*

Reviewed in this issue.

AMERICAN PUBLIC HEALTH ASSOCIATION. *Bibliography on industrial fatigue and allied subjects comprising chiefly material published in English from January, 1921—May, 1929, by Emily G. Dean. [New York (?), 1929.] 38 pp.*

AMERICAN STATISTICAL ASSOCIATION. Committee on Governmental Labor Statistics. *Employment indexes in the United States and Canada, by Miriam E. West. New York, 130 East 22d St., 1929. 70 pp.; charts. (Mimeographed.)*

Examines, individually, the practices of the State, Federal, and other agencies which publish data on employment, as to representation of sample included, data published, construction of indexes (type of index, base period used, etc.), and publication of other data. Contains suggestions and recommendations as to what the author considers the best practice.

ANDERSON, GEORGE. *Fixation of wages in Australia. Melbourne, Macmillan & Co. (Ltd.) and Melbourne University Press, 1929. 568 pp.*

Reviewed in this issue.

BECKNER, EARL R. *A history of labor legislation in Illinois. Chicago, University of Chicago Press, 1929. 539 pp.*

BUND DER INDUSTRIEANGESTELLTEN ÖSTERREICHS. *Grundlagen und Richtlinien Gewerkschaftlicher Rationalisierungspolitik. Vienna, 1929. 560 pp.; charts.*

Contains a review of the rationalization policies of the labor unions in Austria.

BUREAU OF RAILWAY NEWS AND STATISTICS. *Railway statistics of the United States of America for the year ended December 31, 1928, compared with the official reports for 1927 and recent statistics of foreign railways, prepared by Slason Thompson. Chicago, 1929. 151 pp.; maps, charts.*

Includes data on number of railway employees, wages paid, and accidents to passengers and employees.

CHAMBER OF COMMERCE OE THE UNITED STATES. Department of Manufacture. *Pensions: Fundamentals in the development of pensions and other retirement plans. Washington, 1929. 54 pp.*

A brief summary, with discussion of the various types of pension and retirement plans in force, typical provisions of such plans, some of the factors to be considered when the establishment of retirement plans is contemplated, and a bibliography of recent publications on the subject.

COMITÉ POUR L'EXPOSITION ET LA SEMAINE SOCIALE. *L'Exposition sociale et la semaine sociale à Helsingfors 20–26 Août, 1928. Helsingfors, 1929. 58 pp.*

Gives an account of the exposition of the various Scandinavian countries held in the capital of Finland in August, 1928. General conditions of the working population, industrial accidents, industrial disputes, wages and hours, labor organizations, etc., were shown for each country. Accounts of conferences of labor inspectors, of statisticians, etc., are also given.

COMMITTEE ON THE COST OF MEDICAL CARE. *The first two years' work, July, 1927, to June, 1929. Washington, 910 Seventeenth Street NW., 1929. 23 pp.*

This report gives an account of the studies already completed, those under way, and those planned for the near future. There is also a list of recent articles dealing with the economic problems involved in the care and prevention of illness.

CONFÉDÉRATION INTERNATIONALE DES TRAVAILLEURS INTELLECTUELS. *Congrès de Varsovie, Septembre, 1928. [Paris?], 1929. 64 pp.*

Proceedings of the international congress of intellectual workers held at Warsaw, September 26 to 29, 1928.

CONGRÈS INTERNATIONAL DE L'ORGANISATION SCIENTIFIQUE DU TRAVAIL, IV°. *Memoires. Paris, 1929. [Various paging.]*

A collection of the papers presented at the Fourth International Congress on Scientific Management.

DEUTSCHE GESELLSCHAFT FÜR GEWERBEHYGIENE. *Die gewerbliche Staublungenerkrankung. Berlin, 1929. 146 pp., illus. (Beihefte zum Zentralblatt für Gewerbehygiene und Unfallverhütung, Nr. 15.)*

Contains articles contributed by a number of medical specialists on various industrial lung diseases caused by dust.

FOSTER, WILLIAM Z. *Wrecking the labor banks—the collapse of the labor banks and investment companies of the Brotherhood of Locomotive Engineers. Chicago, Trade Union Educational League, 1927. 60 pp.*

GAGG, MARGARITA. *Die Frau in der sweizerischen Industrie. Zurich, Leipzig, Verlag Orell Fussli, 1928. 348 pp.*

Reviewed in this issue.

GREENWOOD, ARTHUR. *The labor outlook. London, Chapman & Hall (Ltd.), 1929. 246 pp.*

A discussion of the Labor Party's attitude toward the leading social and political problems confronting it, and of its practical proposals for their solution. Three introductory chapters give the fundamental principles of the party; the remainder of the volume is devoted to its social, economic, and international policies.

HEART COUNCIL OF GREATER CINCINNATI. *Life conservation studies [No.] 1: Physical impairment among office workers—a statistical report based on complete physical examination of 1,000 men in office groups, by Carey P. McCord and others. Cincinnati, 1929. 66 pp. (Mimeographed.)*

A digest of this report is given in this issue of the Review.

HERMAN, S. JAMES. *Why "Public credits" is the logical and practical solution of the housing problem of the lower income group. [Detroit, Michigan Housing Association?] 1929. 16 pp. (Reprint of paper read before conference of Town Planning Institute of Canada, Winnipeg, Manitoba, June 17–19, 1929.)*

ILLINOIS CHAMBER OF COMMERCE. *Do they pay by check or cash? by Jennie Lee Schram. Chicago, 35 East Wacker Drive, June 10, 1929. 11 pp. (Mimeographed.)*

Of 329 manufacturing companies answering a questionnaire sent out by the Illinois Chamber of Commerce, 241, or 73.25 per cent, were paying wages by check. The report lists the reasons given by these firms for using the check or the cash methods of payment, and also the types of industries represented. A short bibliography is appended.

JAUSSI, NELLI. *Der wirtschaftliche Aufsteig der Frau. Zurich, Leipzig, Verlag Orell Fussli, 1928. 77 pp.*

Reviewed in this issue.

MINE INSPECTORS' INSTITUTE OF AMERICA. *Proceedings, Knoxville, Tenn., May, 1929. Pittsburgh, 1929. 120 pp.*

The papers presented included the following: Electrical hazards in and about coal mines; Ventilation of gaseous mines in the low coal seams of western Pennsylvania; Use electricity to end the uncertainties of sectional ventilation; Mine safety; and Basic causes of coal-mine accidents.

MUÑOZ, ALFREDO G. *Regimen legal de las sociedades cooperativas. Habana, Comision Nacional de Propaganda y Defensa del Tabaco Habano, 1929. 16 pp.*

A discussion of the legal requirements which must be met by cooperative societies in the matter of constitution and by-laws, objects, share capital, admission of members, amount of shares held by any individuals, etc.

NATIONAL BUREAU OF ECONOMIC RESEARCH (INC.). *Publication No. 14: International migrations. Volume I.—Statistics compiled on behalf of the International Labor Office, Geneva. New York, 474 West 24th Street, 1929. 1112 pp.*

A historical study of the development of international migration statistics. National intercontinental migration records are also included.

NATIONAL CHILD LABOR COMMITTEE. *Child workers in Tulsa, by Charles E. Gibbons and Chester T. Stansbury. New York, 215 Fourth Avenue, 1929. 36 pp.*

A study of child-labor conditions in Tulsa similar to the investigation carried on in three other cities, and published under the title "Child workers in Oklahoma." (See Labor Review, May, 1929, p. 120.) As in that investigation, it was found that the chief problem concerned the work of children attending school who are employed before or after the school sessions, "frequently for a number of hours which can not but spell fatigue, weariness, and lowered vitality." The recommendations include amendment of the child-labor law making it unlawful to employ children under 14 in any gainful pursuit, requiring stricter permit

regulations, prohibiting night work for all under 16, extending the period of compulsory school attendance to include the entire year, and providing that when children go to school and also work the combined hours of school and work in any one day should not exceed 8 hours.

NATIONAL CIVIC FEDERATION. Industrial Welfare Department. *State old-age pensions: Constructive proposals for prevention and relief of destitution in old age. New York, Metropolitan Tower, 1929. 16 pp.*

Gives a brief résumé of the conventional arguments against State old-age pensions. The constructive proposals are for the extension of private industrial pension and insurance plans, improvement in almshouse administration, a flexible system of out-door relief, and a study of the age "dead line" in industry.

NYSTROM, PAUL H. *Economic principles of consumption. New York, Ronald Press Co., 1929. 586 pp.; charts.*

Written with the idea that a more exact knowledge of the character, extent, and trends of consumption are necessary in order to secure the most effective and economical distribution of goods produced. Discusses the economic basis of consumption, the factors influencing the consumer's choice, the public attitude toward consumption, trend of population, income, and consumption, size and compositions of the family, standards of living (10 different levels), and consumption of the various articles included in the family budget.

PAVLOFF, JOSEPH M. *The upbuilding of Soviet Russia. New York, Amtorg Trading Corporation, 1929. 34 pp.*

Contains a review of the five-year plan for industrial development of the Soviet Union, including wages and productivity of labor.

PENNSYLVANIA, UNIVERSITY OF. Wharton School of Finance and Commerce. Industrial Research Department. *Research studies No. VI: Help-wanted advertising as an indicator of the demand for labor, by Anne Bezanson. Philadelphia, 1929. 104 pp.*

Reviewed in this issue.

PHELPS, GEORGE HARRISON. *Our biggest customer. New York, Horace Liveright, 1929. 192 pp.*

The laboring man, according to this author, is "our biggest customer." Stating that "our prosperity is 86 per cent derived from our working population," the author reviews some of the factors that jeopardize the worker's buying power, such as instability of employment, loss of employment, low wages, overproduction, etc., and urges that business should give serious thought to the removal of these factors and to the development of new means of employment which will maintain the worker's buying power.

POISSON, ERNEST. *La politique du mouvement coopératif français. Paris, Les Presses Universitaires de France, 1929. 254 pp.*

Deals with the policies of the French cooperative movement as regards the unity of the various parts of the movement, relations with the public, public authorities, and its employees, its commercial policy, and its practice as regards publicity, education, etc.

PRINCETON UNIVERSITY. Department of Economics and Social Institutions. Industrial Relations Section. *The labor banking movement in the United States. Princeton, N. J., Princeton University Press, 1929. 377 pp.*

Reviewed in this issue.

RACE BETTERMENT FOUNDATION. *Proceedings of the Third Race Betterment Conference, January 2–6, 1928, Battle Creek, Mich. Battle Creek, 1928. 748 pp.; charts, illus.*

Includes addresses on immigration, science, and the worker, work of the Women's Bureau of the United States Department of Labor, problems of public health, mortality rates, recreation, etc.

ROBBINS, HAYES. *Human relations in railroading. New York, General Publishing Co., 1927. xvi, 143 pp.*

Takes up the ways in which better industrial relationships have been and can be maintained.

SCHULZ, HERMANN. *Die Deutsche Sozialversicherung (Kranken-, Unfall-, Invaliden- und Angestelltenversicherung). Berlin, Franz Vahlen, 1926. 190 pp. Zweite umgearbeitete Auflage.*

Contains a review of the German social insurance laws (sickness, accident, invalidity, and salaried employees' insurance).

SKENE SMITH, NEIL. *Economic control: Australian experiments in "rationalization" and "safeguarding." London, P. S. King & Son (Ltd.), 1929. 306 pp., map, illus.*

A study, first, of the methods now generally recognized by economists by which it is possible to exercise a conscious control over the economic system, and, secondly, of the methods to this end now in use in Australia, with some consideration of the results that country has obtained by their means. A book of peculiar timeliness in view of the present industrial situation in Australia, and of the recent attempt to do away with its Federal arbitration court.

STEWART, FRANK MANN. *The National Civil Service Reform League—history, activities, and problems. Austin, University of Texas, 1929. 304 pp.*

Describing the conditions which brought the league into existence, and tracing its development down to the present time, the author feels that the problem before it has become more complex. The negative side, the mere keeping out of the service of incompetents who are brought in under an unrestricted spoils system, has been partially accomplished, but proves not to be sufficient, even if the campaign were entirely successful. There is need of a vigorous, constructive plan of employment management, designed to make the public service a career for trained and competent persons. Both sides need to be developed and pushed, and the present league is, the author holds, the logical agency for both lines of work.

STRACHEY, RAY. *The cause: A short history of the women's movement in Great Britain. London, G. Bell & Sons (Ltd.), 1928. 429 pp., illus.*

A study dealing with the whole scope of the women's movement from the first mild attempts to secure some modifications of the married woman's legal status and open some chances for genuine education, in place of mere accomplishments, to girls and women, up to the present situation. The struggle for suffrage naturally takes up a considerable space, but is treated as only one aspect of a movement dealing with nearly the whole field of women's life. The later chapters, dealing with the opening of new opportunities to women during the war, their work in industry, and the greater part they have since played in the labor movement, in social work, and in public administration, are of particular interest.

TILTMAN, H. HESSELL. *J. Ramsay MacDonald—labor's man of destiny. New York, Frederick A. Stokes Co., 1929. 456 pp., illus.*

TRUMBULL, FREDERICK M. *Guidance and education of prospective junior wage earners. New York, John Wiley & Sons (Inc.), 1929. 298 pp.*

The author's purpose is to present relevant information, and to offer constructive suggestions leading to a clearer understanding of two problems which confront parents and educators: (a) how to help boys and girls use to their best advantage the school facilities available to them, and (b) how to develop and improve practicable school service that will meet the specific and immediate needs of the boys and girls whose school careers are not likely to extend far into or beyond the secondary schools.

VERBAND DER BUCHBINDER UND PAPIERVERARBEITER DEUTSCHLANDS. *Bericht des Vorstandes über das Geschäftsjahr, 1928.* [*Berlin*], *1929. 176 pp.*

Contains information in regard to the working conditions of the members, and activities of the German Bookbinders' and Paper Workers' Union during 1928.

VITELES, HARRY. *The Jewish cooperative movement in Palestine. Tel-Aviv, 1929.* [*Various paging.*] *Charts.* (*Published as Bulletin of the Palestine Economic Society, Vol. IV, No. 1, June, 1929.*)

Reviewed in this issue.

VSEUKRAINSKII INSTITUT TRUDA. *Izmereniia intellecta. Poltava, 1929. 276 pp.; charts.*

This volume, published by the All-Ukrainian Institute of Labor, contains a review and analysis of intelligence tests.

—— *O prednosylkakh ratsional'noi organizatsii. Poltava, 1929. 339 pp.; charts.*

A review and analysis of the fundamental principles of scientific management, published by the All-Ukrainian Institute of Labor.

WARD, FRANK BIRD. *The United States Railroad Labor Board and railway labor disputes. Philadelphia, University of Pennsylvania, 1929. 93 pp.*

Discusses the circumstances surrounding the establishment and organization of the board, the principles underlying its decisions, its powers as defined by the courts, and the Watson-Parker Act which abolished the board and provided for the establishment of the present United States Board of Mediation.

WERTHEIM LECTURES ON INDUSTRIAL RELATIONS, 1928. *Cambridge, Harvard University Press, 1929. 229 pp.*

Seven lectures: I. Experiences with cooperation between labor and management in the railway industry, by O. S. Beyer, jr.; II. Industrial relations in the bituminous coal industry, by Joseph H. Willits; III. Industrial relations, by John P. Frey; IV. Jurisdictional disputes, by John R. Commons; V. Contributions of personnel management to improved labor relations, by William M. Leiserson; VI. Maladjustment of the industrial worker, by Elton Mayo; VII. The opposition of interest between employer and employee: Difficulties and remedies, by Frank W. Taussig.

MAY 24 1930

UNITED STATES DEPARTMENT OF LABOR
JAMES J. DAVIS, Secretary
BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

MONTHLY
LABOR REVIEW

INDEX TO VOLUME 29

JULY TO DECEMBER, 1929

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1930

For sale by the Superintendent of Documents, Washington, D. C. - - - - - Price 5 Cents Per Copy

MONTHLY
LABOR REVIEW

INDEX TO VOLUME 29

JULY TO DECEMBER, 1979

Index to Volume 29——July to December, 1929

NOTE.—This is a SUBJECT INDEX. Names of authors do not appear as main entries

	Page
Accident prevention, general:	
Safety. Campaign and prize award, Nitrate Producers' Association, Chile, 1929	Aug. 84
—— National contest, companies operating mines and quarries in 35 States, results, 1928	Aug. 81–3
—— Organization, plants with and without, accident experience, by industry group and number of employees, Illinois	July 101–3
—— Regulations. State, uniformity in, importance of	Oct. 71–2
Accident prevention, by industry:	
Building construction. Massachusetts, address of John P. Meade	Dec. 55–7
Mining. Coal-dust explosions. Bureau of Mines Technical Paper No. 448	Oct. 68–9
Sugar refining. California and Hawaiian Sugar Refining Corporation	July 72
Accident statistics, general:	
Falls, by origin of hazard, policyholders of Metropolitan Life Insurance Co., 1926–1928	Dec. 61–2
Accident statistics, by industry:	
Building construction. Massachusetts, 1925–1928	Dec. 57
Cement industry. Portland Cement Association of Chicago, experience	Aug. 80–1
Coke ovens. Fatalities and injuries, Bureau of Mines Technical Paper No. 443	July 99–101
Iron and steel industry. United States, 1913–1928	Oct. 32–42
Mining. Idaho, mine inspection report, annual	Aug. 83
—— Results of national safety contest, 1928, Bureau of Mines Serial No. 2938	Aug. 81–3
Mining, coal. United States, accident costs, Bureau of Mines Circular No. 6166	Dec. 57–61
Mining, metal. United States, accident costs, Bureau of Mines Circular No. 6166	Dec. 57–61
Petroleum industry. California. Fatalities	Dec. 62–3
Quarries. Results of national safety contest, 1928, Bureau of Mines Serial No. 2938	Aug. 81–3
Accident statistics, by locality:	
Bulgaria. By cause and severity, 1922–1926	Dec. 67–8
California. Fatalities in petroleum industry	Dec. 62–3
Estonia. By industry or occupation, 1922–1927	Nov. 43–4
Germany (The Ruhr). Mining, 1928	Dec. 68–9
Illinois. Minors under 16 years of age injured, by industry and legality of employment, 1928	Sept. 68
Latvia. By month, 1928, 1929	Nov. 44
Massachusetts. Annual report, 1927–28	Dec. 63–4
Sweden. By industry group, 1926	Dec. 69–70
Switzerland. By year, 1918–1927	Dec. 70
Actors, dramatic stage, Percy Williams and Edwin Forrest homes for	Sept. 3–4
Advertising, help-wanted, an indicator of labor demand	Dec .190–2
Aeronautics:	
Airplane manufacture, employment and production in	Aug. 62–3
Age distribution. (*See* Classification.)	
Aged persons, care of:	
Homes. Actors, dramatic stage, Edwin Forrest and Percy Williams Homes	Sept. 3–4
—— Business and professional people, Seabury Memorial Home and Ward Homestead	Sept. 4–5
—— Colored people only	Aug. 10–14
—— Firemen's Home, New Jersey and New York	Sept. 5–6
—— Ministers, six denominations	Sept. 6
—— Music teachers, Presser Home, Philadelphia	Sept. 6
—— Occupational groups	Sept. 1–7
—— Old people's, administration and conditions	July 1–21
—— Old people's, problem of idleness in	Dec. 13–25
—— Sailors' Snug Harbor, Quincy (Mass.) and Staten Island, (N. Y.)	Sept. 6–7
Agriculture (*except* Wages and hours, *which see*):	
Unemployment. Survey of, agricultural and industrial, Porto Rico resolution, July 19, 1929	Nov. 117
Airplane manufacture, employment and production in	Aug. 62–3
Alien labor. (*See* Employment of foreigners.)	
American Federation of Labor:	
Department of Railway Employees. Research Foundation incorporated, purposes, etc.	Sept. 49–50
Arbitration adjustments, labor disputes. (*See* Industrial disputes.)	
Automobile exhaust gas. (*See* Industrial diseases and poisons.)	

Page

Banks, commercial, and "pay-roll check plan," attitude ..... Sept. 36
Benefits and benefit funds:
Mutual benefit associations, employees. California & Hawaiian Sugar Refining Corporation ..... July 72
Mutual insurance funds. Belgium, report of operations, 1928 ..... Sept. 92
Bibliography:
The older worker in industry: List of references (Thompson) ..... July 237–42
Blasters, silicosis among. (*See* Industrial diseases and poisons.)
Bonuses and premiums:
Wage-termination bonus. Hartford (Conn.) Rubber Co ..... Nov. 118
Budgets, cost-of-living, United States:
Clothing and household articles, textile materials used for, trend ..... July 76–9
Budgets, cost-of-living, foreign countries:
Argentina (Buenos Aires). Laborer's family, income and expenditure, by means of support, 1928 ..... Dec. 229–30
Canada (Ontario). Independent woman workers, by item, October 1928 ..... Oct. 255
Building and loan associations:
United States League of Local. Annual report of secretary, 1928 ..... Nov. 58–9
Building construction industry (*except* Wages and hours, *which see*):
Accident prevention, address of John P. Meade ..... Dec. 55–7
Costs, new work, repairs, etc. (*See* Housing.)
Permits issued. By city (25,000 population or over) and geographic division ..... Dec. 111–20
—— By city (100,000 population or over) ..... Oct. 121–54; Nov. 10–14
Building trades (*except* Wages and hours, *which see*):
Unemployment statistics. Organized workers, Massachusetts ..... July 206
Business and professional people, Seabury Memorial Home and Ward Homestead for ..... Sept. 4–5

Calendar simplification, National Committee on, for the United States, report ..... Oct. 43–6
Canning, fruits and vegetables. (*See* Food canning and preserving.)
Census, industrial:
Manufactures, United States, 1930, new features of ..... Nov. 21
Child labor and welfare, United States:
Compensation status. (*See* Workmen's compensation and insurance: Minors, illegally employed.)
Girls with heart disease, employment and workshop for, New York City ..... Aug. 64–5
Illinois. Minors under 16 years of age injured, by industry and legality of employment, 1928 ..... Sept. 68
Juvenile delinquency. Detroit (Mich.), housing study in relation to ..... Dec. 120–1
Kentucky. State law held applicable to interstate commerce, court decision ..... Aug. 71
Maryland. Berry and vegetable pickers, Anne Arundel County ..... July 86–7
—— Canneries, tomato ..... July 86–7
Migratory child workers, California and elsewhere ..... Sept. 57–9
Child labor and welfare, foreign countries:
Great Britain (England). Age of compulsory school attendance raised from 14 to 15, effective April 1, 1931 ..... Sept. 59
—— Juvenile labor, changes in supply of ..... Aug. 72–3
Cinematographic Institute. (*See* Motion-picture industry.)
Classification:
Age. Cotton-mill woman workers, Ford Motor Co., Cheney Bros., and California & Hawaiian Sugar Refining Corporation employees ..... Nov. 22–4
Occupations. Denver high school graduates, classes of 1928 and 1929 ..... Dec. 192–4
Clerical occupations, physical impairment. (*See* Health and hygiene.)
Clerks, Freight Handlers, Express and Station Employees, Brotherhood of Railway and Steamship:
Court decision. Right to collective bargaining upheld, Texas & New Orleans Railroad Co ..... Oct. 78–80
Clothing industry, men's (*except* Wages and hours, *which see*):
Cutters (dismissed or quit), absorption of, into other trades ..... Oct. 186–90
Clothing industry, women's (*except* Wages and hours, *which see*):
Garment trades, adverse conditions in, strike of July 1, and threatened strike December 1, 1929 ..... Sept 21–32
Collective agreements, United States, by industry:
Street railways. Cincinnati Street Railway Co ..... Nov. 112–13

	Page
Collective agreements, foreign countries:	
Germany. Agreement in effect, 1924–1928, statistics	Nov. 113–15
Great Britain. Railroads, wage-cut agreement of August 13, 1928, continued to May 13, 1930	Dec. 164
Italy. Gas industry, national agreement, January 1, 1928	July 178–9
Colonial times, history of wages from, in United States	Dec. 122–4
Colored persons, aged. (*See* Negroes.)	
Combines. (*See* Mergers, combines, etc.)	
Community welfare:	
California & Hawaiian Sugar Refining Corporation, activities	July 73
Compulsory work:	
India. Forced labor in	Aug. 67–8
Conciliation and arbitration, United States:	
Arbitration cases involving wages and hours, results, 1865 to 1929	Nov. 14–20
Department of Labor. (*See article* "Conciliation work of the Department of Labor," *each issue of Review*.)	
Conciliation and arbitration, foreign countries:	
Australia. Federal system of arbitration, Government bill to repeal	Nov. 80–1
China. Act of June 9, 1929, translation of text (Tso)	Sept. 98–102
Germany. Labor courts, local, provincial, and Federal, activities of, 1929	Dec. 109
Great Britain (England). Cotton-textile industry, arbitration award, wage reduction, August 15, 1929	Oct. 181–2
India. Trades disputes act effective May 8, 1929, synopsis	Sept. 102–3
Contract shops, silk industry, Paterson (N. J.)	Aug. 3–10
Conventions, meetings, etc.:	
American Federation of Labor. Annual convention, 1929, proceedings	Dec. 94–7
—— State branches. New England States, congress	Dec. 34–5
Cooperatives. Great Britain, conference on business policy	Dec. 92
Family-allowance funds. France, annual congress	Aug. 95–8
Governmental Officials in Industry, Association of, United States and Canada. Annual convention	Aug. 118
Industrial Accident Boards and Commissions, International Association of. Annual convention (sixteenth)	Nov. 48–9
—— Advance notice	Dec. 73
Industrial Relations Association, International. Conference, June 26 to July 3, 1929, Germany	Aug. 66–7
International Labor Conference. Annual session	Aug. 118–19
Labor congress. New England, Workers' Education Bureau and State federations of labor, October 25–27, 1929	Dec. 34–5
Safety Council, National. Annual Congress	Nov. 41–3
Trades and Labor Congress. Canada, 45th annual meeting	Nov. 65–7
Trades-Union Congress, All-India	Aug. 119–20
Workers' education. New England congress, Worcester (Mass.), October 25–7, 1929	Dec. 34–5
Cooling systems, theaters and buildings, labor-cost reduction in manufacture of	Nov. 21
Cooperation, United States:	
Banks, labor. Rise and development of movement	Dec. 83–8
Brasstown (N. C.), developments	Oct. 103
Building and loan associations. Statistics, by State, 1928	Nov. 58–9
Cheese factories. Trenary (Mich.) Farmers' Cooperative Store, new department	Dec. 93
Consumers' Cooperative Services (Inc.), operating statistics	Oct. 103–4
Consumers' institute, first, Brookwood College	Oct. 96
Cooperative Central Exchange, Superior (Wis.), theatricals, and technical adviser service	Dec. 92, 93
Cooperative Trading Co., Waukegan (Ill.), recreation activities	Dec. 92
Creamery (butter) production, per cent of, by State	Oct. 105
District Park Association, Marquette (Mich.)	Dec. 92
Dorchester (Wis.) and its vicinity, conference	Oct. 104–5
Farmers' Union Exchange, Omaha (Nebr.), dividend policy	Oct. 105
Federal Farm Board. Creation and function	Oct. 96–9
Franklin Creamery, Minneapolis, educational committee, work of	Sept. 111–12
Housing. Farband Housing Corporation, Jewish, cooperative activities	Sept. 106
—— Paul Laurence Dunbar Apartments, Harlem (N. Y.), Negro cooperative project	Sept. 107–8
Northern States Cooperative League, membership and sales	Oct. 104
Oil associations. Kansas, Union Oil Co	Sept. 111
Recreation. Activities of consumers' societies	Oct. 63–5

	Page
Cooperation, United States—Continued.	
Societies. Farmers' buying associations, survey by Department of Agriculture	July 117
Statistics, membership. Cooperative Temperance Cafe ("Idrott"), Chicago	July 116
Statistics, operating (sales, etc.). Cooperative Central Exchange, Superior, Wis	July 115
—— Cooperative Temperance Café ("Idrott"), Chicago	July 116
—— Farmers' Union State Exchange, Omaha, Nebr	July 115
Cooperation, foreign countries:	
Belgium. Cooperative Office, combined membership, sales, etc	Oct. 104
Canada. The Canadian Wheat Pool, study of (Irwin)	Nov. 59–60
—— (Maritime Provinces). Fishermen, Government recommendations	July 117–18
—— (Newfoundland). Fishermen's Protective Union, rapid growth	July 118–19
—— United Grain Growers and Retail Consumers' Societies, statistics of operation, 1928	Sept. 113–14
China. Cooperative enterprises, spread of	Sept. 114–15
Finland. Consumers' cooperative movement	July 119–20
—— Membership statistics, old and new groups	July 120
Great Britain. Conference, on business policy	Dec. 92
—— (England). Royal Arsenal Cooperative Society, Woolwich, departments maintained	Sept. 113
—— (England). Wholesale Society pension scheme in effect July 15	Oct. 105
—— (London). London Cooperative Society, short history of	Oct. 101–3
International. Comparison, 28 countries, consumers' societies, membership and annual business	Oct. 99–101
—— Cooperative subcontracting (*commandite*), report on, International Labor Office	Aug. 115–16
—— Cooperative Women's Guild survey, women in agriculture	Oct. 60–2
Palestine. Types, and characteristics of movement	Dec. 89–91
Poland. Consumers' cooperative movement, status	July 121–2
Russia. Maternity and infancy, Centrosoyus fund for protection of	Sept. 115
—— Motion pictures in cooperative-educational work	Aug. 116–17
—— Two-year training courses for supervisory work	Oct. 104
Cost of living, United States:	
And in Europe, comparison, projected inquiry by International Labor Office	Dec. 229
Budgets, family. (*See* Budgets, cost-of-living.)	
Changes, per cent, by city and by item of expenditure, specified years	Aug. 16–30
Expenditures, distribution. Professional man's family, 1816–17 and 1926–27, Washington, D. C	Dec. 222–8
Federal employees. Part 1, five cities (506 families)	Aug. 41–61
—— Part 2, food consumption	Sept. 248–59
—— Part 3, miscellaneous expenditures	Oct. 241–54
—— Part 4, installment buying	Nov. 1–10
Index numbers. International comparison	Aug. 31–40
Minnesota. Village and town families, income and expenditures, 1929	Nov. 171–5
What women wore in the nineties	Sept. 260
Cost of living, foreign countries:	
Argentina (Buenos Aires). Index numbers, food, rent, clothing, and other expenses, 1914–1926	July 232–3
Australia. Index numbers, international comparison	Aug. 32–40
Belgium. Index numbers, international comparison	Aug. 31–9
Bulgaria. Increase, March, 1929	Sept. 261
Canada. Index numbers, international comparison	Aug. 31–9
Czechoslovakia. Index numbers, international comparison	Aug. 31–9
Denmark. Index numbers, international comparison	Aug. 31–9
Europe. And in the United States, comparison, projected inquiry of International Labor Office	Dec. 229
Finland. Index numbers, international comparison	Aug. 31–9
France. Index numbers, international comparison	Aug. 31–9
Germany. Index numbers, international comparison	Aug. 31–9
Great Britain (United Kingdom). Index numbers, international comparison	Aug. 32–40
India. Index numbers, international comparison	Aug. 32–40
Ireland. Index numbers, international comparison	Aug. 31, 33
Italy. Index numbers, international comparison	Aug. 31–9
Japan. Wages and, comparison	Oct. 54–5
Mexico. Family of four, by State and Federal district, 1922–1927	Oct. 255–6
Netherlands. Index numbers, international comparison	Aug. 32, 34
New Zealand. Index numbers, international comparison	Aug. 32–40
Norway. Index numbers, international comparison	Aug. 32–40

	Page
Cost of living, foreign countries—Continued.	
Peru. Food, rent, clothing, and miscellaneous, index numbers, 1913–1928	Oct. 256
Poland. Index numbers, international comparison	Aug. 32–40
South Africa. Index numbers, international comparison	Aug. 32–34
Sweden. Index numbers, international comparison	Aug. 32–40
Switzerland. Index numbers, international comparison	Aug. 32–40
Cotton, change to rayon for certain garments	July 76–9
Cotton manufacturing (*except* Wages and hours, *which see*):	
Age distribution, woman workers, mills, North and South	Nov. 22–4
Japan. Spinning and weaving, efficiency of labor	Oct. 57–9
Night work. Elimination of, as a cure for overproduction	Dec. 148
Cyanides, poisoning from. (*See* Industrial diseases and poisons.)	
Deaf and dumb in industry. (See Rehabilitation, reeducation, and reemployment.)	
Death notices, labor officials. (*See* Obituary.)	
Decisions of courts:	
Child labor. State law (Ky.) held applicable to interstate commerce	Aug. 71
Contract of employment. Antiunion contracts, Adair case, Coppage case, and Hitchman case, United States Supreme Court	Aug. 112–14
—— Conditioned on purchase of employer's capital stock held unconstitutional, Massachusetts	Aug. 104–5
Employers' liability. Federal railroad statute, recovery under, barred by fraud in obtaining employment	Aug. 105–6
Injunctions. Anti-injunction acts, constitutional status of	Aug. 106–11
Labor organizations. Collective bargaining, Texas and New Orleans Railroad case appealed to Supreme Court	Oct. 78–80; Dec. 82
Trading. Coercion of employees in, issuance of scrip, Kentucky	Dec. 80
Workmen's compensation. Employee killed on way to work, compensation denied, Utah	Nov. 56–7
—— Maritime employment, Federal act of 1927, declaration of deceased employee as evidence of fact	Dec. 81
—— Maritime employments, seamen on ships lost at sea, no recovery for death of	July 110–11
—— Minor illegally employed, covered by compensation act, Massachusetts	July 87–8
Directories.	
Labor officials. Foreign countries	July 257–64
—— United States, Federal, and State	July 243–57
"Dismissal wage":	
Hartford (Conn.) Rubber Co., removal of plant to Detroit, and "wage-termination bonus"	Nov. 118
Displacement, by labor-saving machinery. (*See* Machinery displacing labor.)	
Distribution, occupational. (*See* Classification.)	
Dry ice, neuritis from. (*See* Industrial diseases and poisons.)	
Dusts, United States:	
Explosions. Coal-dust, Bureau of Mines Technical Paper No. 448	Oct. 68–9
Granite dust. Silica dust, effect on workers. Public health bulletin No. 187	Dec. 45–8
Efficiency, labor. (See Production and productivity.)	
Eight-hour day, foreign countries:	
Great Britain. London Agreement and Washington (8-hour) Convention, Government announcement	Aug. 159
Elderly workers. (*See* Older worker in industry.)	
Employers' associations, United States:	
Newspaper Publishers' Association, American. Arbitration (trade) board awards. (*See* Printing trades.)	
"Employer's Labor Statement," proposal	Aug. 65–6
Employment of foreigners:	
Great Britain. Entry of foreigners for employment, restrictions upon	July 80–1
Employment, stabilization of:	
California & Hawaiian Sugar Refining Corporation	July 74
Cincinnati citizens' committee on, with 10 subcommittees, creation of, and functions	Nov. 117–18
Consolidated Water Power and Paper Company, minimum annual income guarantee plan	Sept. 182
Legislation. Massachusetts and Porto Rico. Resolutions for survey, July, 1929	Nov. 116–17
Pottery industry, stability of employment, 1923–1928	July 180–1
Public works. Jones bill (S. 626, 71st Cong. 1st sess.) to stabilize employment, and State precedents for	Oct. 184–6

Page
Employment, stabilization—Continued.
Seaboard Air Line Railway, steady employment guarantee, shop employees ..... Sept. 183
Silk industry. Paterson (N. J.), Broad Silk Manufacturers' Association, program, 4-day basis ..... Dec. 165
Employment statistics, United States:
Advertising linage (help-wanted), an indicator of labor demand ..... Dec. 190-2
Airplane manufacture ..... Aug. 62-3
Building trades. Massachusetts organized workers, unemployment statistics ..... July 206
Part-time work. Agencies for securing ..... Dec. 41-2
—— New York Bureau of, registrations ..... Dec. 40
—— New York City, jobs for women ..... Dec. 39-43
Private (fee-charging) agencies. Cincinnati, Consumers' League survey, December, 1928 ..... Sept. 184-93
Public (free) employment offices. Cincinnati, Consumers' League survey, December, 1928 ..... Sept. 184-93
Trend of employment, United States. Canning and preserving ..... July 199; Aug. 183; Sept. 214-15; Oct. 209; Nov. 136; Dec. 184
—— Hotels ..... July 198-9; Aug. 182-3; Sept. 213-14; Oct. 208-9; Nov. 135-6; Dec. 183-4
—— Manufacturing industries, selected. (*See section* Trend of employment, *each issue of Review.*)
—— Mining, anthracite and bituminous coal ..... July 194-5; Aug. 178-9; Sept. 209-10; Oct. 204-5; Nov. 131-2; Dec. 179-80
—— Mining, metalliferous ..... July 196; Aug. 179-80; Sept. 210-11; Oct. 205-6; Nov. 133; Dec. 180-1
—— Public utilities ..... July 196-7; Aug. 180-1; Sept. 212; Oct. 206-7; Nov. 134; Dec. 181-2
—— Quarries and nonmentallic mines ..... Aug. 180; Sept. 211; Oct. 206; Nov. 133; Dec. 181
—— Railroads, steam ..... July 200-1; Aug. 184-5; Sept. 215-16; Oct. 210-11; Nov. 137-8; Dec. 185-6.
—— Trade, wholesale and retail ..... July 197-8; Aug. 181-2; Sept. 212-13; Oct. 207-8; Nov. 134-5; Dec. 182-3
Trend of employment, State reports. California ..... July 204; Aug. 188; Sept. 219; Oct. 214; Nov. 141; Dec. 189
—— Illinois ..... July 201, 204; Aug. 186, 188; Sept. 217, 219-20; Oct. 211, 214; Nov. 138-41; Dec. 186, 189
—— Iowa ..... July 201; Aug. 186; Sept. 217; Oct. 211; Nov. 138; Dec. 186
—— Maryland ..... July 201-2; Aug. 186; Sept. 217; Oct. 211-12; Nov. 138-9; Dec. 186-7
—— Massachusetts ..... July 202, 204; Aug. 186, 188; Sept. 217, 220; Oct. 212, 214; Nov. 139, 141; Dec. 187, 189
—— New Jersey ..... July 202; Aug. 186; Sept. 218; Oct. 212; Nov. 139; Dec. 187
—— New York ..... July 202; Aug. 186, 188; Sept. 218, 220; Oct. 212, 214; Nov. 139, 141; Dec. 187, 189
—— Oklahoma ..... July 202-3, 204-5; Aug. 187, 188-9; Sept. 218, 220; Oct. 212, 214; Nov. 139-40, 141-2; Dec. 187, 189
—— Pennsylvania ..... July 203, 205; Aug. 187, 189; Sept 218, 220-1; Oct. 213, 215; Nov. 140, 142; Dec. 188, 190
—— Wisconsin ..... July 203, 205; Aug. 187, 189; Sept. 219, 221; Oct. 213, 215; Nov. 140; Dec. 188
Excavation workers, silicosis among. (*See* Industrial diseases and poisons.)
Exhaust gas, automobile. (*See* Industrial diseases and poisons.)

Family allowances:
Australia. Royal Commission on Child Endowment or Family Allowances, report, 1929 ..... Oct. 81-3
Canada, Resolution in Parliament, and report on ..... Aug. 94-5
France. Congresses on ..... Aug. 95-8
Family dependency, unemployment as a cause of. (Luten) ..... Dec. 1-12
Fatigue, industrial:
Great Britain. Monotony in work, effects of ..... Oct 66-7
First aid. (*See* Medical and hospital service.)
Fixation, wage. (*See* Minimum wage.)

	Page
Food canning and preserving:	
Maryland. Children employed in fruit and vegetable picking and canning	July 86-7
Forced labor. (*See* Compulsory work.)	
Foreigners, employment of. (*See* Employment of foreigners.)	
Fruit picking and canning, Maryland, children employed in	July 86-7
Garment trades. (*See* Clothing industry, women's.)	
Glass industry (*except* Wages and hours, *which see*):	
National Window Glass Workers, the passing of the	Oct. 1-16
Glass Workers, National Window:	
Disintegration and dissolution	Oct. 1-16
Governmental Officials in Industry, Association of, in the United States and Canada (A. G. O. I.):	
History of (Schutz), address at sixteenth annual convention	Oct. 25-31
Handicapped, training and placement of. (*See* Rehabilitation, reeducation, and reemployment.)	
Handicrafts, revival and development of, Estonia	Nov. 27-8
Health and hygiene, United States, general:	
Public health. Reports, United States Public Health Service. (*See* United States Government, work of, by department, bureau, etc.)	
Health and hygiene, United States, by industry:	
Clerical occupations, physical impairment in, Cincinnati offices	Dec. 49-50
Health insurance, foreign countries:	
Austria. Physician, function of, in sickness-insurance system	July 105-6
Germany. Physician, function of, in sickness-insurance system	July 105-6
Russia (Soviet). Benefits and source of funds	July 107-8
Help-wanted advertising, an indicator of labor demand	Dec. 190-2
Home work, industrial:	
Trend, by industry, New York City, State home work inspection report, 1924, 1928	Aug. 69-70
Hours of labor, general:	
Housewife, working hours of	Oct. 175-6
International comparison, actual working hours, by industry, October, 1928	July 167-72
(*See also* Wages and hours.)	
Housewife, working hours of the	Oct. 175-6
Housing, United States:	
Building permits issued. (*See* Building construction industry.)	
California & Hawaiian Sugar Refining Corporation, activities	July 73
Costs, new work, repairs, etc. Average cost per family, 1-family, 2-family, and multi-family dwellings, by city, 1929	Nov. 10-14
—— By city (25,000 population or over) and geographic division	Nov. 84-90; Dec. 115-20
—— By city (100,000 population or over)	Oct. 131-54
Detroit (Mich.). Study of, in relation to juvenile delinquency, major crime, and health problems	Dec. 120-1
Mexican labor, sugar-beet fields, South Platte Valley (Colo.)	Sept. 44
New York. Brooklyn Garden Apartments, description	Sept. 106-7
—— Farband Housing Corporation, cooperative activities	Sept. 106
—— Paul Laurence Dunbar Apartments, in Harlem, Negro cooperative project	Sept. 107-8
—— State Board of Housing, report, March 6, 1929, Buffalo and New York City	Sept. 104-8
Housing, foreign countries:	
Great Britain (England). Houses built since 1922, Ministry of Health, tenth annual report	Oct. 155
—— Slum houses, how to abolish	July 112-13
—— Subsidies under Chamberlain Act of 1923 and Wheatley Act of 1924, modification	Sept. 108-9
Italy (Genoa). Institute for the Construction of People's Houses, activities	Sept. 109-10
Spain. Low-priced housing (*Las Casas Baratas*)	July 114
Ice (dry), manufactured, neuritis from. (*See* Industrial diseases and poisons.)	
Illness, incidence of. (*See* Sickness statistics.)	
Immigration, United States:	
Mexican labor. Sugar-beet fields in South Platte Valley (Colo.), detailed study of (Taylor)	Sept. 37-47
Statistics. (*See section* "Immigration and Emigration," *each issue of Review.*)	
Yugoslav immigrants, distribution of, and effect of restrictive quota law	July 235

Page

Immigration, foreign countries:
Canada. Statistics, by sex, occupation, and destination, 1928–29 ... July 236
Japan. Restriction of Korean laborers, proposal ... Nov. 177
Industrial conditions, reports on, by commissions, etc.:
Great Britain. Cotton industry and iron and steel industry, civil research committee on, personnel of subcommittees ... Oct. 51
—— Economic Mission to Australia, report ... Oct. 48–50
Industrial diseases and poisons, United States:
Automobile exhaust gas. Daily exposure to small amounts of, effects ... July 95
Lead. Poisoning, committee report, American Public Health Association ... Aug. 78–9
—— Poisoning, deaths from, 1925–1927, summary of Bul. No. 488 ... Nov. 40–1
Methyl chloride. Poisoning from, in mechanical refrigeration ... Sept. 62–4
Neuritis. Among handlers of manufactured "dry ice," Ohio ... July 96
Occupational diseases. Compensation for, statistics by State ... Sept. 81–9
—— Definition, cause, prevalence, and prevention (Hayhurst) ... July 29–51
—— Massachusetts, annual report, 1927–28 ... Dec. 64–6
—— New Jersey, Industrial Bulletin, June, 1929 ... Aug. 88–9
—— Ramazzini (with portrait), first student of ... Aug. 14–15
Silicosis. Rock drillers, blasters, and excavators, New York City ... July 91–5
Tuberculosis. Occupation as a causative factor in development of ... Sept. 61–2
Industrial diseases and poisons, foreign countries:
Germany. Cyanides, poisoning from, in casehardening, regulations ... Aug. 79
—— Occupational diseases made compensable, list of 22, order effective January 1, 1920 ... Aug. 91–3
Great Britain. Quarries and stone yards, silicosis, Home Office report, 1929 ... Sept. 64–5
Industrial disputes, United States, general:
Arbitration adjustments, by industry, 1928 ... July 141–7
Statistics. Strikes and lockouts, 1916–1928, analysis (17 tables) ... July 132–41
—— (*See also section* Strikes and lockouts in the United States, *each issue of Review.*)
Industrial disputes, United States, by industry and locality:
Architectural-iron workers. Chicago (Ill.) strike, June 1–13, 1929 ... Aug. 125
Bakeries. Kansas City (Mo.), Loose-Wiles Biscuit Co., strike, September 26–30, 1929 ... Nov. 74
Bronze workers. New York City, strike, May 16, 1929 ... July 131; Aug. 126; Sept. 124
Building trades. Locust Summit (Pa.), Stone & Webster, contractors, strike, August 8–12, 1929 ... Oct. 111
—— Philadelphia (Pa.), United Engineers & Construction Co., strike, July 31 to August 6, 1929 ... Sept. 124
—— St. Louis (Mo.), strike, May 1–24, 1929 ... July 131
—— Steubenville (Ohio), strike, painters, plumbers, and electrical workers, May 1–4, 1929 ... July 131
Car builders. McKees Rocks (Pa.), Pressed Steel Car Co., strike, August 1–5, 1929 ... Oct. 111
Carpenters. Plainfield (N. J.), strike, May 1–24, 1929 ... July 131
—— (millwork.) Chicago (Ill.), strike, June 1–13, 1929 ... Aug. 126
Cleaners and dyers. Los Angeles (Calif.), strike, May 8–9, 1929 ... July 131
Clothing, men's. Baltimore (Md.), pressers, pants and vest makers, strike, September 27 to October 4, 1929 ... Nov. 74
—— Philadelphia, strikes, September, 1929 ... Nov. 73
Clothing, women's. New York, embroidery workers, hemstitchers, pleaters, and tuckers, strike, September 4–6, 1929 ... Nov. 73–4
Clothing workers. New York City, strike, July 2–11, 1929 ... Sept. 23–6, 118–19
—— New York. Cloak makers, strike, July 2–16, 1929 ... Sept. 118–19
Cotton mills. Anderson (S. C.), strike, April 4 to June 6, 1929 ... July 132
—— Greenville (S. C.), strike, May 31, 1929 ... July 131
—— (*See also* Industrial disputes: Textile workers.)
Gravediggers. New York, Calvary Cemetery Corporation, strike, July 30, 1929 ... Sept. 123–4; Oct. 112
Leather-goods workers. New York City, Morris White Co., ladies' handbags, strike, July 1–6, 1929 ... Sept. 123
Metallurgical works. Carteret (N. J.), United States Metals Refining Co., strike, September 9–19, 1929 ... Nov. 74
Millwork (carpenters). (*See* Industrial disputes: Carpenters, millwork.)
Mining, anthracite. Coaldale (Pa.), Lehigh Coal and Navigation Co., strike, June 10–11, 1929 ... Aug. 126
—— Glen Lyon (Pa.), Susquehanna Coal Co., strike, August 19–21, 1929 ... Oct. 112
—— Hudson Coal Co. (Pa.), Marvin colliery, strike, August 1–3, 1929 ... Oct. 111

Industrial disputes, United States, by industry and locality—Continued. Page

Mining, anthracite. Nanticoke (Pa.), Glen Alden Coal Co., strike, August 14–17, 1929.. Oct. 111
—— Pennsylvania Coal Co., Underwood Colliery, strike, June 1–10, 1929 Aug. 126
—— Pennsylvania, Lehigh Coal and Navigation Co., strike, July 1–26, 1929 Sept. 118
—— Wilkes-Barre (Pa.), Lehigh and Wilkes-Barre Coal Co., strike, August 29 to September 3, 1929 Oct. 112
Mining, bituminous coal. Marion (Ill.), strike, Cosgrove-Meehan Coal Co., June 1–26, 1929 Aug. 126
Motor-vehicle industry. Atlanta (Ga.), Fisher Body Co., August 16–17, 1929 Oct. 111–12
—— Detroit (Mich.), Murray Corporation of America, auto-body builders, strike, July 17–25, 1929 Sept. 123
Municipal employees. (*See* Industrial disputes: Public service.)
Paper hangers. Philadelphia (Pa.), strike, September 25–26, 1929 Nov. 74
Public service. Chicago, street cleaners, garbage collectors, etc., strike, October 21–24, 1929 Dec. 105
Refining. (*See* Industrial disputes: Metallurgical works.)
Restaurant and cafeteria workers. New York City, strike, April 4 to July 17, 1929 July 132; Aug. 127; Sept. 124
Shoe workers. Beverly, Lynn, and Salem (Mass.), strike, August 28–31, 1929 Oct. 112; Nov. 74
—— Boston and Chelsea (Mass.), strike, April 8 to July 13, 1929 July 132; Aug. 127; Sept. 124; Oct. 112; Nov. 74; Dec. 105
—— Haverhill (Mass.), strike, June 1 to August 19, 1929 Aug. 125–6, 127; Sept. 124
Smelting. (*See* Industrial disputes: Metallurgical works.)
Street railways. New Orleans (La.) Public Service (Inc.), strike, July 1 to September 5, 1929 Sept. 120–3; Oct. 112; Nov. 74–5; Dec. 105
Structural iron workers. Chicago (Ill.), strike, June 1–6, 1929 Aug. 125
Teamsters and chauffeurs. New York City, strike, May 1 to June 8, 1929 July 131
Teamsters and truckers. New York City, fruit and produce, strike, October 5–8, 1929.. Dec. 103
—— New York City, oil, strike, October 5–19, 1929 Dec. 104
—— New York City, wholesale grocers, strike, October 9–22, 1929 Dec. 104
Textile workers. Elizabethton (Tenn.), rayon plants, strike, March to May, 1929 July 132
—— Greenville (S. C.) Mills, Cotton Mill No. 1, strike, May 31 to July 18, 1929 Aug. 126–7
—— Marion (N. C.) Manufacturing Co., strike, July 11 to September 10, 1929 Sept. 123; Oct. 112
—— Marion (N. C.) Manufacturing Co., cotton mills, strike, October 2–15, 1929 Dec. 105
—— Ware Shoals (S. C.) Manufacturing Co., strike, June 3–19, 1929 Aug. 126
Truck drivers. Philadelphia (Pa.), 1-day strike, July 30, 1929 Sept. 123

Industrial disputes, foreign countries:
Australia (New South Wales). By industry, cause, result, and time lost, 1928 July 154–6
China (Greater Shanghai). Strikes in 1928 Oct. 117
France (Paris). Postal employees, "folded arms," 24-hour strike, June 4, 1929 Aug. 131
Great Britain (and Northern Ireland). By industry, cause, and result, 1928 July 152–4
—— (England). Cotton-textile industry, stoppage of work, July 29 to August 15, 1929. Oct. 181–2
International. Journeymen Painters and Allied Trades, by country Nov. 26
Poland (Warsaw). Taxicab drivers' strike, August 5, 1929 Nov. 82
Sweden. Statistics, 1918–1928 Dec. 110

Industrial management:
Inventions, employees'. California & Hawaiian Sugar Refining Corporation, policy July 75

Industrial physicians. (*See* Medical and hospital service.)

Industrial relations, United States:
California & Hawaiian Sugar Refining Corporation July 69–75

Installment buying, Federal employees (506 families) five cities, cost of living study, Part 4.. Nov. 1–10

International Association of Industrial Accident Boards and Commissions:
Meeting, September 22–26, 1930, advance notice Dec. 73

Inventions, employees'. California & Hawaiian Sugar Refining Corporation, policy July 75

Iron and steel industry (*except* Wages and hours, *which see*):
Long-service employees, special retirement adjustments Aug. 99–101

Juvenile delinquency. (*See* Child labor and welfare.)

Knights of Labor, Local Assembly No. 300 (glass workers), rise of, and disruption Oct. 1–6

Labor conditions:
Demand for labor, help-wanted ads, as an indicator of Dec. 190–2
Guatemala. Review of (Troncoso) Sept. 10–12
South Platte Valley (Colo.). Mexican labor, sugar-beet fields Sept. 43–4
Syria. Principal occupations Nov. 28

	Page
Labor cost:	
Cooling apparatus (theaters and buildings), 44 machine operations reduced to 1	Nov. 21
Japan. Analysis of "cheap labor" (Orchard)	Oct. 52-9
Labor movement:	
Brazil. Social legislation, labor organizations, etc. (Troncoso)	July 51-61
Labor offices, Governmental:	
Australia (Queensland). Minister of Labor and Industry, new policy, upon defeat of Labor Party	Sept. 50-1
Mexico. Advisory industrial commission, creation of	Oct. 51
New Jersey. Industrial disease investigation bureau, new, function and report	Dec. 66-7
Labor organizations, United States, general:	
Membership statistics. International comparison	July 123
Policy. On payment of wages, cash or check method	Sept. 35-6
Labor organizations, foreign countries:	
General. Membership, by country and sex, International Federation of Trade Unions, January 1, 1928	July 124
—— Membership, International Trade Secretariats, January 1, 1928	July 125
—— Membership, labor conditions, Journeymen Painters and Allied Trades, by country, 1913, 1925, and 1928	Nov. 25-7
Brazil. List of, with condensed by-laws (Troncoso)	July 57-61
Canada. Membership statistics, 1928	Nov. 65
Costa Rica. Labor unions, slow development of (Troncoso)	Sept. 20
Cuba. Labor unions, list of (Troncoso)	Sept. 9-10
Great Britain. Workers' Union amalgamated with Transport and General Workers' Union	July 125
Guatemala. Trade unions, list of (Troncoso)	Sept. 14-15
Japan. Trade-union membership at close of 1928	Oct. 118
Nicaragua. Labor unions, list of (Troncoso)	Sept. 16-17
Salvador. Labor unions, list of (Troncoso)	Sept. 18-19
South Africa. Membership statistics	Nov. 67-8
"Labor Statement" by employer, proposal	Aug. 65-6
Labor supply and demand. (*See* Labor conditions.)	
Labor turnover:	
American factories. Current monthly rates. (*See section* Labor turnover, *each issue of Review, beginning July, 1929.*)	
—— New duties of Bureau of Labor Statistics. (Berridge)	July 62-5
—— Standard procedure. "Turnover Talks," Metropolitan Life Insurance Co	Dec. 99-100
California & Hawaiian Sugar Refining Corporation	July 74-5
Definition of terms	Dec. 99-100
Government and private employment, Personnel Classification Board preliminary report (H. Doc. No. 602), 1929	Aug. 138-40
Laws and legislation, United States, Federal and general:	
Minimum wage. Table of laws in effect and wage rates determined thereunder	Nov. 29-39
Mothers' pensions. Legislation as of January 1, 1929	Oct. 84-93
Occupational diseases. Laws providing compensation, by State	Sept. 70-81
Public works. Jones bill (S. 626, 71st Cong., 1st sess.), to stabilize employment, and State precedents for	Oct. 184-6
Workmen's compensation. By State, 1929	Aug. 85-8
—— General review of, 1929	Nov. 50-2
Laws and legislation, United States, by State:	
Alaska. Workmen's compensation, amendments, 1929	Nov. 53
California. Public works, to relieve unemployment, 1921	Oct. 186
—— Workmen's compensation, amendment, 1929	Dec. 71
Colorado. Workmen's compensation, 1929	Oct. 73
Connecticut. Workmen's compensation, amendments, 1929	Nov. 53
Delaware. Workmen's compensation, amendment, 1929	Dec. 72
Georgia. Workmen's compensation, amendment, 1929	Dec. 72
Hawaii. Workmen's compensation, amendments, 1929	Nov. 53
Idaho. Public works for "emergency employment," 1915	Oct. 184
Illinois. Workmen's compensation, amendments, 1929	Nov. 53-4
Louisiana. Public works, to relieve unemployment, 1921	Oct. 186
Maryland. Workmen's compensation, 1929	Oct. 73-4
Massachusetts. Workmen's compensation, amendment, 1929	Dec. 72
Michigan. Workmen's compensation, 1929	Oct. 74
Minnesota. Workmen's compensation, 1929	Oct. 74

	Page
Laws and legislation, United States, by States—Continued.	
Missouri. Workmen's compensation, 1929	Oct. 74
Montana. Workmen's compensation, 1929	Oct. 74–5
Nebraska. Workmen's compensation, amendment, 1929	Dec. 72
New Jersey. Public works, to employ the "needy poor," 1915	Oct. 184
New Mexico. Workmen's compensation, 1929	Oct. 75–6
North Dakota. Workmen's compensation, 1929	Oct. 76
Ohio. Workmen's compensation, amendment, 1929	Dec. 72–3
Oklahoma. Workmen's compensation, amendments, 1929	Nov. 54
Oregon. Workmen's compensation, amendments, 1929	Nov. 54–5
Pennsylvania. Public works, unemployment "emergency fund," 1917	Oct. 184–6
—— Workmen's compensation, amendment, 1929	Dec. 73
Porto Rico. Workmen's compensation, amendment, 1929	Dec. 73
South Dakota. Workmen's compensation, 1929	Oct. 76
Washington. Workmen's compensation, 1929	Oct. 76–7
Wisconsin. Antiunion contract law enacted	Aug. 111–12
—— Old-age pension law, amendment	Aug. 101
—— Public works, to relieve unemployment, 1923	Oct. 186
Laws and legislation, foreign countries:	
Belgium. Workmen's compensation law amendment, effective January 1, 1930, provisions of	Aug. 89–90
Brazil. Labor movement and social legislation (Troncoso)	July 51–61
Costa Rica. Labor laws, synopsis of (Troncoso)	Sept. 20
Cuba. Labor laws, synopsis of (Troncoso)	Sept. 8–9
Germany. Unemployment insurance system, amendments, October, 1929	Dec. 165–6
Guatemala. Labor laws, synopsis of (Troncoso)	Sept. 12–13
Mexico. Constitution amended (articles 73 and 123), to permit Federal Labor Code	Oct. 80
Nicaragua. Labor laws, synopsis of (Troncoso)	Sept. 15–16
Salvador. Labor laws, synopsis of (Troncoso)	Sept. 18
Length-of-service:	
Relation to wage rates (Frain)	Oct. 17–25
Steel industry. Special retirement adjustments	Aug. 99–101
Machinery displacing labor:	
Great Britain (England). Placement of men displaced, Messrs. Rowntree method	Oct. 190–1
Maternity and infancy:	
Federal act (Sheppard-Towner) on maternity and infancy hygiene, experience under, 1921–29	Aug. 74–7
Russia. Centrosoyus fund for protection of	Sept. 115
Maternity insurance:	
Spain. Compulsory plan of, decree (No. 938) of March 24, 1929, scope, benefits, and funds	Oct. 95
Medical and hospital service:	
Chicago industrial plants	Dec. 52–4
Clinics. Italy, *La Clinica del Lavoro di Milano*, origin, growth, and purposes	Sept. 65–7
First aid. California & Hawaiian Sugar Refining Corporation	July 72
Medical service. Metal industries, cost, and results	July 96–8
Physicians, industrial. Salaries. (*See* Wages and hours: Salaries.)	
Mergers, combines, etc.:	
Great Britain. Amalgamation of Workers' Union with Transport and General Workers' Union voted	July 125
—— Two movements in industry, "pooling" of capital and geographical distribution	July 79–80
Mexican labor, migrant. (*See* Immigration, United States.)	
Migratory and floating labor:	
Child workers. (*See* Child labor and welfare.)	
Colorado beet fields, recruiting and shipping seasonal labor, Great Western Sugar Co., 1923, 1927	Sept. 40–1
Minimum wage, United States:	
Legislation. Table of laws in effect and wage rates determined thereunder	Nov. 29–39
Minimum wage, foreign countries:	
Australia. Fixation of wages, principles of	Dec. 152–5
—— Living wage, principles of the	Dec. 153
—— Secondary wage (margin for skill)	Dec. 153–4
Great Britain (England). Farm workers, rate changes	July 174–6
Italy. By occupation and locality, as fixed by agreement	Aug. 160–1

	Page
Mining (*except* Wages and hours, *which see*), United States:	
Coal. Dust explosions in mines, Bureau of Mines Technical Paper No. 448	Oct. 68-9
Mining (*except* Wages and hours, *which see*), foreign countries:	
Great Britain (England). Coal, output, cost, and proceeds, by quarter, 1928, 1929	Sept. 51-2
India. Underground employment of women, summary of situation	July 75
Japan. Coal-mining industry, production, total and per capita, 1914-1927	Sept. 53
Ministers, retired, homes for, six denominations	Sept. 6
Minors, employment of. (*See* Child labor and welfare; Minimum wage.)	
Minors, illegally employed. (*See* Workmen's compensation and insurance.)	
Mothers' pensions, United States:	
Legislation. As of January 1, 1929	Oct. 84-93
Motion-picture industry (*except* Wages and hours, *which see*):	
Cinematographic Institute, International Educational, of the League of Nations, work of	Oct. 48
Russia. Movies as propaganda factor, cooperative societies	Aug. 116-17
Motor-vehicle industry (*except* Wages and hours, *which see*):	
Age distribution of employees, Ford Motor Co. (Detroit area)	Nov. 22-4
Museums, industrial:	
Chicago. Rosenwald Industrial Museum, types of exhibits	Sept. 48-9
Music teachers, Presser Home for, Philadelphia	Sept. 6
Mutual benefit associations. (*See* Benefits and benefit funds.)	
Mutual insurance funds. (*See* Benefits and benefit funds.)	
Negroes:	
Adaptation to changing economic conditions, progress in business and industry	July 66-9
Cooperation. Housing project, Paul Laurence Dunbar Apartments, Harlem (N. Y.)	Sept. 107-8
Homes for aged colored persons	Aug. 10-14
West Virginia. Bureau of Negro Welfare and Statistics, report, biennium 1927 and 1928	Oct. 46-8
Women in industry, Women's Bureau Bul. No. 70	Sept. 54-6
Neuritis, "dry ice." (*See* Industrial diseases and poisons.)	
Night work, United States:	
Cotton manufacturing. Elimination of, as a cure for overproduction	Dec. 148
Obituary:	
Van Schaack, David. Pioneer in safety work, November 13, 1929	Dec. 62
Occupational diseases. (*See* Industrial diseases and poisons; Workmen's compensation and insurance.)	
Occupational distribution, Denver high-school graduates, classes of 1928 and 1929	Dec. 192-4
Old-age pensions and retirement, United States:	
Legislation. California, old-age pension act, 1929, text and summary	July 24-7,111
—— Old-age pension, present status	July 21-8
Public service. California State employees, proposed plan	Sept. 94-5
Retirement plans. Western Clock Co. plan, meets valid objections against industrial pensions	Sept. 95-6
Steel industry. Retirement adjustments, special, for long-service employees	Aug. 99-101
Wisconsin. Old-age pension law amended	Aug. 101
Old-age pensions and retirement, foreign countries:	
Canada. Old-age pension laws, statistics of operation, by Province	Aug. 101-3
France. Pensions payable to coal miners, increase	July 174
Great Britain (England). Statistics of administration, 1928-29, Ministry of Health. Tenth annual report	Oct 93
—— Wholesale Society pensions scheme in effect July 15, 1929	Oct. 105
New Zealand. National Provident Fund, scope and operation	Oct. 93-5
Russia (Soviet). Textile industry	July 108
South Africa. Old-age pensions act of 1928, statistics of operation	Sept. 96-7
Older worker in industry:	
Accidents, relation of age to extent of disability	Oct. 69-71
Age distribution, cotton mill woman workers, Ford Motor Company, Cheney Brothers, and California & Hawaiian Sugar Refining Corporation employees	Nov. 22-4
Bibliography. (Thompson)	July 237-42
Employment and adjustment of	Dec. 35-8
Training of, for continued employment	Sept. 47-8
Viewpoint on the elderly worker, Henry Ford	Aug. 63-4
Old people's homes. (*See* Aged persons, care of.)	

	Page
Painters and Allied Trades, Journeymen:	
Membership, labor conditions of national unions of, Bul. No. 3 of International Secretariat	Nov. 25-7
Paper and pulp industry (*except* Wages and hours, *which see*):	
Stability of employment. Consolidated Water Power & Paper Co., minimum annual income guarantee plan	Sept. 182
Payment of wages:	
Check and cash methods, advantages and disadvantages	Sept. 32-6
Petroleum industry (*except* Wages and hours, *which see*):	
California. Fatalities, 1928	Dec. 62-3
Physical impairment. (*See* Health and hygiene.)	
Physicians, industrial. (*See* Medical and hospital service.)	
Physicians, place of, in sickness insurance systems	July 105-6
Pooling of capital. (*See* Mergers, combines, etc.)	
Pottery industry (*except* Wages and hours, *which see*):	
Stability of employment. Per cent of full-time employment, 1923-1928	July 180-1
Printing trades (*except* Wages and hours, *which see*):	
Conciliation. Milwaukee (Wis.). Typographical Union No. 23	Dec. 163
Newspaper. Anaconda and Butte (Mont.) arbitration board decision upheld	Nov. 112
Production and productivity, United States:	
Airplane manufacture, employment and production	Aug. 62-3
Cooling systems, theaters and buildings, labor cost reduction in manufacture of	Nov. 21
Efficiency of labor. Effects of ill health, preventability, and three principles of prevention (Hayhurst)	July 48-51
Mining, coal. Illinois coal report, forty-seventh annual, 1928	Oct. 59
Sugar Industry. California & Hawaiian Sugar Refining Corporation	July 75
Water transportation, 1916-1926	July 82-3
Production and productivity, foreign countries:	
Great Britain (England). Coal-mining industry, output, costs, and proceeds, by quarter, 1928, 1929	Sept. 51-2
Japan. Coal-mining industry, production, total and per capita, 1914-1927	Sept. 53
—— Cotton spinning and weaving, efficiency of labor	Oct. 57-9
Public schools. (*See* Public service.)	
Public service, United States:	
California State employees, proposed pension plan	Sept. 94-5
Federal employees. Part 1, five cities (506 families), cost of living	Aug. 41-61
—— Part 2, food consumption	Sept. 248-59
—— Part 3, miscellaneous expenditures	Oct. 241-54
—— Part 4, installment buying	Nov. 1-10
Firemen, homes for, New Jersey and New York	Sept. 5-6
Municipal employees. Common street labor, long-working hours of (Stewart)	Aug. 1-3
Schools, public. New York State, educational opportunities available to workers	July 126-7
Public works:	
Expansion of (Jones bill, S. 626, 71st Cong., 1st sess.), to stabilize employment, and State precedents for	Oct. 184-6
Spain. Labor contract requirements, Royal decree (No. 744), 1929	Nov. 118-19
Railroads, United States:	
Arbitration award. Clerks, Chicago & Northwestern Railway Co., wage increase, November 4, 1927	Sept. 180-1
—— Shopmen, Southern Railway, wage rates, June 18, 1929	Aug. 140-1
Railway Employees' Research Foundation, incorporation and purposes	Sept. 49-50
Railway labor act, 1926. Award, Boston & Maine Railroad, firemen, mechanical stokers	Dec. 162
—— Award, New York, Chicago & St. Louis Railroad Co., telegraphers, May 15, 1929	Oct. 183
Stability of employment. Seaboard Air Line Railway, shopmen, steady employment guarantee	Sept. 183
Railroads, foreign countries:	
Great Britain. Wage cut agreement of August 13, 1928, continued to May 13, 1930	Dec, 164
Rayon, trend from cotton to, for certain garments	July 76-9
Recreation, United States:	
Community recreation movement, progress, 1928	July 89
Cooperative societies, activities of	Oct. 63-5
Massachusetts. Committee on Needs and Uses of Open Spaces, report to governor	Sept. 60
Refrigerators, electric, methyl chloride poisoning from	Sept. 62-4

Page

Rehabilitation, reeducation, and reemployment, foreign countries:
Great Britain. Deaf and dumb in industry, report of National Institute for the Deaf ..... Sept. 69
Retail prices, United States:
Coal. Average and relative prices, by kind, specified dates, 1913–1929 ..... Aug. 210
—— By city, specified dates, 1928, 1929 ..... July 225–6; Aug. 208–9; Sept. 240–1; Oct. 234–6; Nov. 166–8; Dec. 212–14
Electricity. By city, specified dates, 1927–1929 ..... Aug. 213–16
Food. (*See article* Retail prices of food in the United States, *each issue of the Review.*)
Gas. By city, specified dates, 1913–1929 ..... Aug. 211–12
Index numbers. Foods, etc., international comparison ..... July 228; Oct. 237
Retail prices, foreign countries:
Australia. Foods and groceries, index numbers, international comparison ..... July 229; Oct. 238
Belgium. Foods, etc., index numbers, international comparison ..... July 228; Oct. 237
Canada. Foods, index numbers, international comparison ..... July 228; Oct. 237
Czechoslovakia. Foods, index numbers, international comparison ..... July 228; Oct. 237
Denmark. Foods, index numbers, international comparison ..... July 228; Oct. 237
Finland. Foods, index numbers, international comparison ..... July 228; Oct. 237
France (Paris). Index numbers, international comparison ..... July 228; Oct. 237
—— (except Paris). Index numbers, international comparison ..... July 228; Oct. 237
Germany. Foods, index numbers, international comparison ..... July 228; Oct. 237
Great Britain (United Kingdom). Foods, index numbers international comparison ..... July 229; Oct. 238
India (Bombay). Foods, index numbers, international comparison ..... July 229; Oct. 238
Italy. Foods and charcoal, index numbers, international comparison ..... July 229; Oct. 238
Netherlands. Foods, index numbers, international comparison ..... July 228; Oct. 238
New Zealand. Foods, index numbers, international comparison ..... July 229; Oct. 238
Norway. Foods, index numbers, international comparison ..... July 229; Oct. 238
South Africa. Foods, index numbers, international comparison ..... July 229; Oct. 238
Sweden. Foods, fuel and light, index numbers, international comparison ..... July 229; Oct. 238
Switzerland. Foods, index numbers, international comparison ..... July 229; Oct. 238
Rock drillers, silicosis among. (*See* Industrial diseases and poisons.)

School attendance. (*See* Child labor and welfare.)
School-leaving age. (*See* Child labor and welfare.)
Scrip, issuance of. (*See* Decisions of courts: Trading.)
Seamen (*except* Wages and hours, *which see*):
Homes for, Sailors' Snug Harbor, Quincy (Mass.) and Staten Island (N. Y.) ..... Sept. 6–7
Workmen's compensation, court decisions. (*See* Decisions of courts.)
Seasonal labor. (*See* Migratory and floating labor.)
Secondary wage (margin for skill). (*See* Minimum wage.)
Sick leave with pay:
Government and private employment, Personnel Classification Board preliminary report (H. Doc. No. 602), 1929 ..... Aug. 136–7
Sickness insurance. (*See* Health insurance.)
Sickness statistics, United States:
Hagerstown (Md.). 1,800 white households, by economic status, December, 1921 ..... Nov. 45–7
Male employees in 13 plants, 1928 and 1929 ..... Dec. 50–2
Public Health Service. Report, industrial employees, February 22, 1929 ..... July 90–1
Silicosis. (*See* Industrial diseases and poisons.)
Silk industry (*except* Wages and hours, *which see*):
Age distribution of employees, Cheney Bros ..... Nov. 22–4
Paterson (N. J.). Contract work in ..... Aug. 3–10
—— Producers' program to stabilize employment ..... Dec. 165
Slum houses, abolishing. (*See* Housing.)
Small claims courts:
Hartford (Conn.). Statistics of operation, July 1, 1927 to December 31, 1928 ..... Aug. 121–2
Social insurance, foreign countries:
France. Act of March 14, 1928, administrative order establishing ..... July 104
Netherlands. Invalidity, old-age, and accident insurance systems, operation ..... Dec. 73–9
Russia (Soviet). Benefits and assistance provided, source of funds ..... July 105–9
(*See also* Health insurance; Unemployment insurance.)
Stabilization, labor force. (*See* Employment, stabilization of.)
Stage Employees and Moving-Picture Machine Operators of the United States and Canada, International Alliance of Theatrical:
Award. Colorado Industrial Commission ..... Dec. 162–3

	Page
Standard of living:	
Europe and in United States, comparison, projected inquiry by International Labor Office	Dec. 229
Professional man's family in 1816–17 and 1926–27, comparison	Dec. 222–8
Stone trades (*except* Wages and hours, *which see*):	
Granite workers, effect of silica dust, 14 plants, Public health bulletin No. 187	Dec. 45–8
Street and Electric Railway Employees of America, Amalgamated Association of:	
Agreement. Cincinnati Street Railway Co. and Division No. 627, 3-year, July 1, 1929	Nov. 112–13
Street railways (*except* Wages and hours, *which see*):	
Arbitration award. Indianapolis Street Railway Co. employees and Public Service Commission	July 178
—— St. Louis (Mo.), May 20, 1929	Aug. 163
Electric-railway trackmen, skilled or unskilled labor, which?	Sept. 50
Sugar industry (*except* Wages and hours, *which see*):	
Beet fields. Mexican labor in South Platte Valley (Colo.), detailed study of (Taylor)	Sept. 37–47
—— Sugar-beet and beet-sugar production, economics of, Great Western Sugar Co., Colorado	Sept. 38–40
Refineries. Age distribution of employees, California & Hawaiian Sugar Refining Corporation	Nov. 22–4
—— California & Hawaiian Sugar Refining Corporation, industrial relations in	July 69–75
Sweating system:	
Cloak and suit industry. Drive against sweatshop and substandard production	Sept. 30
Textile industries (*except* Wages and hours, *which see*):	
Night work. Elimination of, as a cure for overproduction	Dec. 148
South Carolina. Statistics of development, 1908, 1918, and 1928	July 79
Unemployment. Survey of, Massachusetts resolution, July 7, 1929	Nov. 116
Textile materials used for clothing and household articles, changes in kind of	July 76–9
Transportation, water. (*See* Water transportation.)	
Typographical Union, International:	
Arbitration (trade) board decisions. (*See* Printing trades.)	
Unemployment, United States:	
Cause of family dependency, personal and family aspects, Boston (Luten)	Dec. 1–12
Census of the United States (Fifteenth) for 1930 to include unemployment	Aug. 164
Help-wanted ads. as an indicator of demand for labor	Dec. 190–2
Legislation. Massachusetts and Porto Rico, resolutions for survey, July, 1929	Nov. 116–17
New York State. Permanent advisory council on employment problems appointed	Aug. 164–5
Surveys. Buffalo, November, 1929	Dec. 192
—— Cincinnati, May, 1929	Dec. 192
Window-glass workers, present employment status	Oct. 15–16
Unemployment, foreign countries:	
Estonia. Unemployment prevention, revival, and development	Nov. 27–8
Europe. Conditions, summer of 1929	Nov. 143–5
Germany. By industry or occupation, seasonal and nonseasonal, workers receiving benefits, March, 1929	Nov. 145–7
Great Britain (England). Training centers for the unemployed, in farm work and in domestic service	Oct. 106–8
—— Unemployment Grants Committee, summary of work, December, 1920, to June 10, 1929 (eighth annual report)	Sept. 193–4
Hungary. By occupation and sex, union members, June, 1929	Nov. 144
Irish Free State. Committee on unemployment relief, report	Dec. 166–7
Netherlands. By industry, workers receiving benefits, May, 1929	Nov. 144–5
Poland. By industry or occupation group, employment bureau registrations, 1928, 1929	Nov. 145
South Africa (Transvaal). Training farm at Losperfontein	Sept. 194–6
Unemployment insurance and benefits, foreign countries:	
Germany. Amendments to system, October, 1929	Dec. 165–6
Great Britain (England). State and worker contribute equally to insurance fund	Sept. 92–3
United States Government, work of, by department, bureau, etc.:	
Farm Board, Federal. Creation, make-up, and work of	Oct. 96–9
Public Health Service. Report, sickness among industrial employees	July 90–1
Vacations with pay:	
California & Hawaiian Sugar Refining Corporation	July 72
Foreign countries. By legislation and by collective agreement, specified countries	Oct. 156–62
Germany. Collective agreement provisions, 1924–1928	Nov. 118

Vacations with pay—Continued. Page
Government and private employment, Personnel Classification Board preliminary report (H. Doc. No. 602), 1929 — Aug. 136-7
Great Britain (England). By agreement, general practice, important industries — Oct. 162-3
Vegetable picking and canning, Maryland, children employed in — July 86-7
Vital statistics:
Births. Cost of, layettes, etc., Minnesota village and town families, 1929 — Nov. 175
Vocational education, United States:
Missouri. Report, 2-year period ending June 30, 1928 — Nov. 63-4

Wage claims:
Colorado. Collection of, by bureau of labor statistics, 1927 and 1928 — July 165
Massachusetts. Collection of, annual report, 1927-28 — Dec. 145-6
Nevada. Collection of, biennium report, 1927 and 1928 — Oct. 176
Wage, dismissal:
Cutters, Hart, Schaffner & Marx, Chicago — Oct. 187
Wage fixation. (*See* Minimum wage.)
"Wage-termination bonus." (*See* "Dismissal wage.")
Wages and hours, United States:
Auto agency, accessories, and repairs. Colorado, by occupation and sex, 1928 — July 161
Automobile tire factory. Colorado, by occupation and sex, 1928 — July 161
Auto tire sales. Colorado, by occupation and sex, 1928 — July 161
Awning and tent industry. Colorado, by occupation and sex, 1928 — July 163
Bakeries. Colorado, by occupation and sex, 1928 — July 161
—— Union rates, time-work trades, 1929, preliminary report — Dec. 26-33
Bottling works. Colorado, by occupation and sex, 1928 — July 161
Bricklayers. By city, union scale, 1913-1929 — Sept. 145-6
Brick manufacture. Colorado, by occupation, 1928 — July 161
Building laborers. By city, union scale, 1913-1929 — Sept. 146-7
—— Denver (Colo.), wage increase (by arbitration), July 18, 1929 — Sept. 180
—— (*See also* Wages and hours: Unskilled labor.)
Building trades. Colorado, by occupation and locality, annual earnings (*wages only*) — July 164
—— Union rates, time-work trades, 1929, preliminary report — Dec. 26-33
Carpenters. By city, union scale, 1913-1929 — Sept. 147-8
Cement finishers. By city, union scale, 1913-1929 — Sept. 148-9
Cement industry. Colorado, by occupation, 1928 — July 161
Chauffeurs, teamsters, and drivers. Union scale, time-work trades, 1929, preliminary report — Dec. 26-33
Clay products. Colorado, by occupation, 1928 — July 161
Cleaning and dyeing industry. Colorado, by occupation and sex, 1928 — July 161
Clothing. Colorado, by occupation and sex, 1928 — July 162
Colonial times. History of wages in, summary of Bul. No. 499 — Dec. 122-4
Compositors, book and job. By city, union scale, 1913-1929 — Sept. 149-50
Compositors, newspaper. By city, union scale, 1913-1929 — Sept. 151
Creameries. Colorado, by occupation and sex, 1928 — July 161-2
Electrotypers, finishers. By city, union scale, 1913-1929 — Sept. 152
Electrotypers, molders. By city, union scale, 1913-1929 — Sept. 153
Farming. Average rates and index numbers, 1910 to October, 1929 — Nov. 104-7
—— Casual and noncasual farm hands, perquisites and wages of — Aug. 144-8
—— Wage rates, yearly average and index numbers, 1910 to July, 1929 — Sept. 171-3
Fishing industy Alaska, by occupation, 1927-28 (*wages only*) — July 159
Flour mills. Colorado, by occupation, 1928 — July 162
Foundries. Gray-iron, by occupation and region, July 1, 1929 — Aug. 143-4
Foundries and machine shops. Colorado, by occupation, 1928 — July 162
Garment manufacturing. (*See* Wages and hours: Clothing.)
Granite cutters. Union rates, time-work trades, 1929, preliminary report — Dec. 26-33
Granite cutters, inside. By city, union scale, 1913-1929 — Sept. 154
History of, from Colonial times (summary of Bul. No. 499) — Dec. 122-4
Hod carriers. By city, union scale, 1913-1929 — Sept. 155
Hotels and restaurants. Colorado, hotel employees, by occupation and sex, 1928 — July 162
—— Colorado, restaurant employees, by occupation and sex, 1928 — July 163
Ice, artificial. Colorado, by occupation 1928 — July 161
Ice cream, wholesale. Colorado, by occupation, 1928 — July 162
Inside wiremen. By city, union scale, 1913-1929 — Sept. 156-7
Iron and steel industry. Blast furnaces and Bessemer converters, 1929 — Sept. 139-44
—— Colorado, iron works, by occupation, 1928 — July 162

Wages and hours, United States—Continued. Page
Iron and steel industry Open-hearth furnaces, blooming, plate, and puddling mills, 1929 ... Oct. 164–70
—Rail, bar, sheet, and tin-plate mills, 1929 ... Nov. 91–9
Labor organizations Union wage changes reported, date, and new and former rate, by industry, occupation, and locality ... Nov. 100–3; Dec. 140–3
Laundry workers Union rates, time-work trades, 1929, preliminary report ... Dec. 26–33
Linemen. Union rates, time-work trades, 1929, preliminary report ... Dec. 26–33
Longshoremen. Union rates, time-work trades, 1929, preliminary report ... Dec. 26–33
Lumber industry. Colorado, lumber and mill, by occupation and sex, 1928 ... July 162
Manufacturing industries. Connecticut, "able-bodied adults," by occupation and sex, earnings, December 1, 1928 (*wages only*) ... July 166
— Illinois, by sex, April, 1929 (*hours only*) ... Sept. 173–4
—Massachusetts, annual earnings, by industry, 1919–1927 (*wages only*) ... Sept. 175–6
Manufacturing plants Wage changes reported, date, and employees affected ... Nov. 103–4; Dec. 144
Medical and hospital service Nurses, trained and graduate, metal industries ... July 97–8
— Physicians, industrial and part-time doctors, metal industries ... July 97–8
Metallurgical works. Colorado, ore reducing and refining, by occupation, 1928 ... July 163
Mining. Idaho, by occupation, 1928 (*wages only*) ... Aug. 148–9
Mining, bituminous coal. 1926 and 1929, summary of Bulletin report ... Sept. 130–9
Mining, coal. Alaska, by occupation, 1928 ... July 160
— Virginia, by occupation and color, 1927 ... Aug. 149
Mining, lode Alaska, by occupation, 1928 ... July 160
Mining, metalliferous Colorado, by occupation and locality ... July 164
Motion-picture industry. Colorado, by occupation and sex, 1928 ... July 162
Motormen and conductors. St. Louis (Mo.) arbitration award, May 20, 1929 ... Aug. 163
Office employees. Government Service and private employment, Personnel Classification Board, preliminary report (H. Doc. No. 602), 1929 ... Aug. 133–40
Ore reducing and refining. (*See* Wages and hours: Metallurgical works.)
Painters. By city, union scale, 1913–1929 ... Sept. 157–8
Plasterers. By city, union scale, 1913–1929 ... Sept. 158–9
Plasterers' laborers. By city, union scale, 1913–1929 ... Sept. 159–60
Plumbers. By city, union scale, 1913–1929 ... Sept 160–1
Pottery industry. Colorado, by occupation and sex, 1928 ... July 163
Printing trades. Book and job, union rates, time-work trades, 1929, preliminary report ... Dec. 26–33
— International Typographical Union members, annual earnings, 1909–1929 ... Nov. 108
— Newspaper, union rates, time-work trades, 1929, preliminary report ... Dec. 26–33
Public service. Boston and Worcester (Mass.) municipal employments, by occupation, July 1, 1928 ... Nov. 107–8
— City employees, St. Paul (Minn.), salary standardization ... Dec. 146
— Fire department, municipal, salaries in, by city and State ... Dec. 124–40
— Government and private employment, wages and conditions in, Personnel Classification Board preliminary report (H. Doc. No. 602), 1929 ... Aug. 133–40
— Municipal employees, common street labor, long working hours of (Stewart) ... Aug. 1–3
— Municipal salaries, New York City, present and adjusted rates ... Dec. 147–8
— Teachers, public school, Colorado, elementary, junior and senior high, salaries ... July 164
Quarry workers. Virginia, by occupation, color, and kind of quarry, 1927 ... Aug. 150
Railroads. Clerks, freight handlers, express and station employees, wage changes (by agreement or award), New York ... July 158
— Clerks, wage increase (by agreement or award), Chicago & Alton and Wabash railroads ... Sept. 168
— Clerks, wage increase (by arbitration), Chicago & North Western Railway Co ... Sept 180–1
— Dining-car stewards, wage changes (by agreement or award), Great Northern Railway and Southern Pacific ... Aug. 142
— Dining-car stewards, wage increase (by agreement or award), Pennsylvania Lines East ... Sept. 168
— Maintenance-of-way employees, wage increase (by agreement), New York Central Railroad, August 1, 1929 ... Oct. 173–4
— Miscellaneous employees, Pennsylvania Lines East, schedule of rates, by class, April 16, 1929 ... Sept. 169–70
— Shopmen, wage changes (by agreement or award), Southern Railway ... Aug. 140–1
— Shopmen, wage increases (by agreement), Akron, Canton & Youngstown Railroad, September 1, 1929 ... Oct. 174
— Shopmen, wage increase (by agreement or award), specified roads ... Sept. 168
— Shops and roundhouses. Colorado, by occupation, 1928 ... July 163

Wages and hours, United States—Continued. Page
Railroads. Signalmen, wage changes (by agreement or award), specified roads ..... July 157; Aug. 142; Sept. 168-9
—— Signalmen, wage increase (by agreement), Elgin, Joliet & Eastern Railway, Grand Trunk Western Railway Co., July 1, 1929 ..... Oct. 174
—— Telegraphers, wage changes (by agreement or award), Chicago, Indianapolis & Louisville Railroad ..... Aug. 141
—— Telegraphers, wage changes (by agreement or award), New York, Chicago & St. Louis Railroad ..... July 158
—— Train dispatchers, wage changes (by agreement or award), specified roads ..... Aug. 141
—— Yardmasters, wage changes (by agreement or award), Chesapeake & Ohio Railroad ..... July 158
Sheet-metal workers. By city, union scale, 1913–1929 ..... Sept. 161-2
Silk industry. Pennsylvania, Special Bulletin No. 29, 1929 ..... Oct. 176-81
Stonecutters. By city, union scale, 1913–1929 ..... Sept. 162-3
—— Union rates, time-work trades, 1929, preliminary report ..... Dec. 26-33
Stores, department. Colorado, by occupation and sex, 1928 ..... July 162
Stores, drug. Colorado, by occupation and sex, 1928 ..... July 162
Street railways. Boston (Mass.) Elevated Railway Co., wage increase (by agreement), 2-year ..... Oct. 174-5
—— Covington (Ky.), Newport & Covington Light & Traction Co. wage increase (by agreement), August 5, 1929 ..... Oct. 174
—— Memphis (Tenn.), wage increase awarded, by occupation ..... Sept. 169
—— Toledo (Ohio). Community Traction Co., wage increase (by agreement), June 1, 1929 ..... Oct. 174
Structural-iron workers. By city, union scale, 1913–1929 ..... Sept. 163-4
Sugar industry. California & Hawaiian Sugar Refining Corporation ..... July 71-2
—— Colorado beet fields ..... Sept. 41-3
Teachers, public school. (*See* Wages and hours: Public service.)
Telegraphers, commercial. Press associations, wage increase, by agreement ..... Sept. 169
Telegraphers, railroad. (*See* Wages and hours: Railroads.)
Tents. (*See* Wages and hours: Awning and tent industry.)
Typesetting-machine operators, book and job. By city, union scale, 1913–1929 ..... Sept. 164-5
Typesetting-machine operators, newspaper. By city, union scale, 1913–1929 ..... Sept. 166-7
Unskilled labor. Entrance rates for "common labor," by industry and by geographic division, July 1, 1929 ..... Oct. 171-3
Vinegar and pickle works. Colorado, by occupation and sex, 1928 ..... July 163
Woman labor. Illinois factories 1928 (*hours only*) ..... July 84-5
(*See also* Hours of labor, general.)
Wages and hours, foreign countries:
General. International comparison, actual working hours, by industry, October, 1928 ..... July 167-72
—— International comparison, real wages, International Labor Office ..... Dec. 148-51
—— (*See also* Hours of labor, general.)
Argentina (Buenos Aires). Index numbers, 1914–1926 (*wages only*) ..... July 232, 233
Belgium. Building trades, by occupation (skilled and unskilled), hourly wages fixed by agreement, 1929 ..... July 172-3
—— Printing trades, by occupation and city, April 1 to June 30, 1929 (*wages only*) ..... Aug. 151-2
Denmark (Copenhagen and Frederiksberg). Skilled and unskilled workers, by occupation, July, 1928 (*wages only*) ..... Sept. 176-7
France. Drop forging, by occupation, February, 1929 (*wages only*) ..... Nov. 109
—— Electrical construction, by occupation, February, 1929 (*wages only*) ..... Nov. 109
—— Iron and steel foundries, by occupation, February, 1929 (*wages only*) ..... Nov. 109
—— Laborers and skilled laborers, by sex, February, 1929 (*wages only*) ..... Nov. 109
—— Machine industries, general. By occupation, February, 1929 (*wages only*) ..... Nov. 109
—— Metal construction, by occupation, February, 1929 (*wages only*) ..... Nov. 109
—— Metal-pipe manufacture, by occupation, February, 1929 (*wages only*) ..... Nov. 109
—— Mining, coal, pit-head and underground miners, fixed by agreement ..... July 174
—— (Paris). Postmen (*wages only*) ..... Aug. 152
—— (Paris region). Automobiles, by occupation, February, 1929 (*wages only*) ..... Nov. 109
Germany. Edge-tool industry, Solingen (Kummer) ..... Aug. 153-5
—— Iron industry, Remscheid (Kummer) ..... Aug. 155-6
—— (Berlin). Metal workers, actual earnings, October, 1928 ..... Aug. 156-8
—— (Rhineland-Westphalia). Metal workers, skilled, semiskilled, and helpers, by sex, and branch of industry, October, 1928 ..... Nov. 110-11

Wages and hours, foreign countries—Continued. Page
Great Britain. London Agreement and Washington (8-hour) Convention, Government announcement ... Aug. 159
—— (and Northern Ireland). Clothing industries, number employed and average earnings, 1924, 1928 ... Dec. 156–60
—— (and Northern Ireland). Foods, drinks, and tobacco, number employed and average earnings, 1924, 1928 ... Dec. 157–60
—— (and Northern Ireland). Paper, printing, and bookbinding, number employed and average earnings 1924, 1928 ... Dec. 157–60
—— (and Northern Ireland). Pottery, brick, glass, chemicals, etc., number employed and average earnings, 1924, 1928 ... Dec. 156–60
—— (and Northern Ireland). Textile industries, number employed and average earnings, 1924 ... Dec. 156–60
—— (England). Cotton-textile industry, wage reduction award ... Oct. 181–2
Italy. Food industries, by occupation and sex (*wages only*) ... Dec. 161
Japan. By industry, 1926 ... Oct. 52–7
Rumania. Agricultural, chemical, furniture and carpentry, leather, and metallurgical industries, 1928 ... July 176–7
Switzerland. Building, metal, and wood industries, workers injured in accidents (*wages only*) ... Aug. 162
—— (Basel). Silk-dyers and finishers, June, 1929 ... Sept. 177–8
Syria. Specified trades ... Nov. 28
Ukraine (Socialist Soviet Republic). By industry, 1928 ... Sept. 178–9
Yugoslavia. Glass industry, by class of work, 1929 ... July 177
Water transportation (*except* Wages and hours, *which see*):
Productivity of labor, United States, 1916–1926 ... July 82–3
Welfare work, United States:
California & Hawaiian Sugar Refining Corporation ... July 72–3
Government and private employment, Personnel Classification Board, preliminary report (H. Doc. No. 602), 1929 ... Aug. 137
Wholesale prices, United States:
Index numbers (1926=100). By group and subgroup (*See each issue of Review*).
Index numbers. International comparison ... Sept. 242; Dec. 218
Wholesale prices, foreign countries:
Australia. Index numbers, international comparison ... Sept. 244; Dec. 220
Austria. Index numbers, international comparison ... Sept. 242; Dec. 218
Belgium. Index numbers, international comparison ... Sept. 242; Dec. 218
Canada. Index numbers, international comparison ... Sept. 242; Dec. 218
China. Index numbers, international comparison ... Sept. 244; Dec. 220
Czechoslovakia. Index numbers, international comparison ... Sept. 242; Dec. 218
Denmark. Index numbers, international comparison ... Sept. 242; Dec. 218
Finland. Index numbers, international comparison ... Sept. 242; Dec. 218
France. Index numbers, international comparison ... Sept. 242; Dec. 218
Germany. Index numbers, international comparison ... Sept. 242; Dec. 218
Great Britain (United Kingdom). Index numbers, international comparison ... Sept. 244; Dec. 220
India. Index numbers, international comparison ... Sept. 244; Dec. 220
Italy. Index numbers, international comparison ... Sept. 242; Dec. 218
Japan. Index numbers, international comparison ... Sept. 244; Dec. 220
Netherlands. Index numbers, international comparison ... Sept. 244; Dec. 220
New Zealand. Index numbers, international comparison ... Sept. 244; Dec. 220
Norway. Index numbers, international comparison ... Sept. 244; Dec. 220
South Africa. Index numbers, international comparison ... Sept. 244; Dec. 220
Spain. Index numbers, international comparison ... Sept. 244; Dec. 220
Sweden. Index numbers, international comparison ... Sept. 244; Dec. 220
Switzerland. Index numbers, international comparison ... Sept. 244; Dec. 220
Widows' and orphans' pensions, foreign countries:
Great Britain (England). Statistics of administration, Ministry of Health, tenth annual report, 1928–29 ... Oct. 93
New Zealand. National Provident Fund, scope and operation ... Oct. 93–5
Women in industry, United States:
Negro women. (*See* Negroes.)
Part-time jobs, New York City ... Dec. 39–43

	Page
Women in industry, foreign countries:	
India. Mining, underground employment, summary of situation	July 85
Switzerland. Economic advance of, and general conditions, factory workers	Dec. 43–4
Workers' education, United States:	
Congresses. (*See* Conventions, meetings, etc.)	
Extent of movement, July 1, 1926, to June 30, 1928	Nov. 61–2
Public schools and the worker, educational opportunities available, New York State	July 126–7
Workers' education, foreign countries:	
Great Britain (England). Training centers for the unemployed, in farm work and domestic service	Oct. 106–8
India (Bombay). Labor college established	Nov. 64
Workmen's compensation and insurance, United States:	
California. Legislative action, 1929	Dec. 71
Court decisions. (*See* Decisions of courts.)	
Delaware. Legislative action, 1929	Dec. 72
Georgia. Legislative action, 1929	Dec. 72
Iowa. Legislative action, 1929	Sept. 89–90
Legislation. Amendments passed by State legislatures, 1929	Nov. 52–5; Dec. 71–3
—— By State	Aug. 85–8; Oct. 73–7
—— General review of, 1929	Nov. 50–2
Massachusetts. Legislative action, 1929	Dec. 72
Minors, illegally employed. Massachusetts, covered by compensation act, court decision	July 87–8
Nebraska. Legislative action, 1929	Dec. 72
New Jersey. Legislative action, 1929	Sept. 90
Occupational diseases. Compensation for, statistics by State	Sept. 81–9
—— Compensation legislation for, United States and Canada (Hayhurst)	July 33–46
—— Effects upon efficiency, preventability, and prevention (Hayhurst)	July 48–51
—— Laws providing compensation for, by State	Sept. 70–81
Ohio. Legislative action, 1929	Dec. 72
Pennsylvania. Legislative action, 1929	Dec. 73
Porto Rico. Legislative action, 1929	Dec. 73
Rhode Island. Legislative action, 1929	Sept. 90
State reports. Montana, thirteenth annual, 1927–28	July 104
—— Wisconsin, compensable cases, 1928. Bul. No. 20	Nov. 55
Wyoming. Legislative action, 1929	Sept. 90
Workmen's compensation and insurance, foreign countries:	
Belgium. Act (effective January 1, 1930) amending law of December 24, 1903, provisions of	Aug. 89–90
Canada. Occupational diseases, compensation legislation for (Hayhurst)	July 45–6
—— (British Columbia). Report, compensation board, 1928	Sept. 90–1
—— (Ontario). Report, compensation board, 1928	Sept. 91
Germany. Occupational diseases made compensable, list of 22, by order effective January 1, 1929	Aug. 91–3
X-rays, exposure to. (*See* Industrial diseases and poisons.)	
Yale University. Institute of Human Relations, establishment of	June 109

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BUREAU OF LABOR STATISTICS

Vol. 29, No. 6 December, 1929

MONTHLY
LABOR REVIEW

SPECIAL FEATURES IN THIS ISSUE

Unemployment as a cause of family dependency, p. 1

Problem of idleness in old people's homes, p. 13

Union wage rates in 1929, p. 26

Accident prevention from the standpoint of the State, p. 55

History of wages from colonial times, p. 122

Salaries in fire departments of principal cities, p. 124

NEW PUBLICATIONS OF THE BUREAU OF LABOR STATISTICS

Statistics of industrial accidents in the United States to the end of 1927. Bulletin No. 490.

Handbook of labor statistics: 1929 edition. Bulletin No. 491.

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